

Water Discharge Application for Authorisation Variation

Western Sydney International (Nancy Bird Walton) Airport

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

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Definitions

Term	Description
ABP	Airport Business Park
AEPR	<i>Airports (Environment Protection) Regulations 1997</i>
AEO	Airport environment officer
the Act	<i>Airports Act 1996</i>
Airport Plan	Part 3 of the document outlines the conditions for the design, construction and operation of the Stage 1 development, which include environmental standards and implementation of mitigation measures identified in the EIS under the EPBC Act
ANZG	Australia and New Zealand Guidelines
ATL	Airport Terminal
BTEXN	Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene
CEMF	Construction Environmental Management Framework
CPBG	CPB Contractors Ghella Joint Venture
CRP	Construction (Rail) Plan
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
EIS	Environmental Impact Statement
EPA	Environment Protection Agency
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
Epic	Epic Environment Pty Limited
GIS	Geographic Information System
kL	Kilolitre(s)
L	Litre(s)
ML	Megalitre(s)
µg	Microgram(s)
m ³	Cubic Metre(s)
mg	Milligram(s)
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
Project	Sydney Metro - Western Sydney Airport
REMM	Revised Environmental Mitigation Measures
SBT Works	Station Boxes and Tunnelling Works
TBM	Tunnel boring machine
TDS	Total Dissolved Solids
TRH	Total Recoverable Hydrocarbons
TSS	Total Suspended Solids
WDIA	Water Discharge Impact Assessment
WQO	Water Quality Objectives
WSACo (or WSA)	Western Sydney Airport Corporation
WSI	Western Sydney International



Term	Description
WTP	Water Treatment Plant

Contents

Water Discharge Application for Authorisation Variation	i
Definitions	i
1. Introduction	1
1.1. Purpose and application	1
1.2. Project Overview	1
1.3. Construction Methodology	3
1.4. Environmental Management Plan	1
2. Authorisation Requirement	2
2.1. Summary Application Details.....	2
3. Regulations, Conditions of Approval and Existing Licences	4
3.1. Project Specific Requirements	4
3.2. AEPR requirements	5
4. Water Quality Objectives	10
5. Water Management	11
5.1. Construction activities.....	11
5.2. Sources of Inflow to Water Treatment Plants	11
5.3. Groundwater Quality.....	12
5.4. Existing WTPs Processes	12
5.5. Influent and Effluent water quality	13
5.6. Potential Sources of Elevated Chromium / Zinc in the Influent	14
5.7. Assessment of Additional Water Treatment Options	15
5.8. Discharge	16
6. Baseline Environmental Conditions	17
6.1. Surface Water Flows	18
6.2. Surface Water Quality	19
6.3. Aquatic Ecology	19
6.4. Species Sensitivity to Analytes.....	20
7. Predicted Effects of Effluent Discharge	22
7.1. Risks from Cr.....	24
7.2. Risks from Zn	24
8. Proposed Authorisation Limits	24
9. Supporting Information	25
10. References	26

Tables

Table 1: SBT Worksite overview	3
Table 2: Applicant Details	2
Table 3: Application Details	2
Table 4: Regulations, Conditions of Approval and Existing Licences	4

Table 5: Regulations, Conditions of Approval and Existing Licences	5
Table 6: Water Quality Objectives	10
Table 7: WTP averaged construction stage inflow rates - Reasonable Worst-Case Scenario	11
Table 8: WTP average construction stage inflow rates – Average Conditions Scenario	12
Table 9: Indicative construction program from TBM and cross-passages	12
Table 10: Local Groundwater Quality (at Tunnel Depth)	12
Table 11: On-Airport Water Treatment Plant Features, Processes and Functions.....	13
Table 12: Influent Water Quality	13
Table 13: Effluent Water Quality	14
Table 14: Treatment Technology Review	15
Table 15: WTP averaged construction stage outflow rates - Reasonable Worst-Case Scenario ...	17
Table 16: WTP average construction stage outflow rates – Average Condition Scenario.....	17
Table 17: Baseline Environmental Conditions of Badgerys Creek	17
Table 18: flow statistics for SW01 and SW03	19
Table 20: Local Surface Water Quality – Badgerys Creek	19
Table 21: Estimated Water Quality in Receiving Waterways at discharge point with dilution – average and worst-case discharge	22
Table 22: Proposed Authorisation Limits - Metals	25
Table 23: Supporting Information.....	25

Figures

Figure 1: Overview of the Project.....	2
Figure 2: On-Airport Site Layout (Rail Construction Impact Zone)	3
Figure 3: On-Airport Site Layout, Water Treatment Plants, and Wastewater Discharge Infrastructure.....	1
Figure 4: Eh-pH (Pourbaix) stability diagram for the speciation of chromium.....	15
Figure 5: Airport surface water and groundwater monitoring locations.....	18

Annexures

Annexure A WTP Discharge Environmental Management Plan
Annexure B Aquatic Ecological Assessments
Annexure C Chromium and Zinc Dilution Multivariate Assessment
Annexure D Groundwater Monitoring Report
Annexure E Influent and effluent concentrations over time

1. Introduction

1.1. Purpose and application

This application for a variation to the authorisation has been prepared by CPB Contractors Ghella Joint Venture (CPBG) to comply with sub-regulation 4.01 (General duty to avoid pollution) under the *Airports (Environment Protection) Regulations 1997* (AEPR). The authorisation approved by the AEO in July 2023 relates to the release of treated groundwater from tunnelling (construction) into the receiving waters of Badgerys Creek within Airport Land.

A variation to the Application for Authorisation is being sought in accordance with Part 15.6 of the AEPR. A variation to the authorisation application is made as there is an indication of an exceedance of the acceptable limits of contaminants within freshwater,. In the case of discharge from the on-airport water treatment plants (WTPs) for the Sydney Metro - Western Sydney Airport (SMWSA) Project (the Project), there are indications that Chromium (Cr), specifically hexavalent chromium, and Zinc (Zn) levels exceed the acceptable limits.

This variation is required as effluent concentrations of Cr and Zn are greater than AEPR Schedule 2, Table 1 accepted limits.

The variation is sought for the period to November 2024 in accordance with the application of authorisation dated November 2023. CPBG has considered all reasonably available measures to avoid and minimise the need for an authorisation variation. CPBG is also applying to NSW EPA for variations to the discharge limits for WTPs located off-Airport land.

This application details:

- Any changes to the scope of works CPBG will be undertaking on site;
- The interaction with groundwater;
- New options considered for management of groundwater and water treatment plant (WTP) effluent;
- Justifications for the authorisation variation application; and
- Scientific data to explain any impacts and outcomes from the authorisation variation.

This application for a variation to the authorisation includes information consistent with the requirements under Division 2, Section 5.07 (application for authorisation) and Section 5.16 (Authorisations may be varied or revoked) of the AEPR, and relevant information to support determination of the application under Division 2, Section 5.09 of the AEPR.

This application for a variation to the authorisation also provides information relevant to the:

- Airport Plan
- Sydney Metro Construction Environmental Management Framework (CEMF)
- EPBC Act Final Environmental Impact Assessment of on-airport proposed action (EPBC 2019/8541)
- Contractual requirements, including the SBT Design and Construction (D&C) Deed and General and Particular Specifications
- Applicable legislation.

1.2. Project Overview

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a 23 km new metro rail line from the existing Sydney Trains suburban T1 Western Line (at St Marys) in the north and the Aerotropolis (at Bringelly) in the south. The alignment includes tunnels and civil structures, including viaduct, bridges, surface and open-cut troughs between the two tunnel sections (Figure 1).





Figure 1: Overview of the Project

The Project will be delivered through several works packages including the Station Boxes and Tunnelling Works (SBT Works). The On-Airport Railway Development SBT Works of the Project comprises the following key features (Figure 2) as described in the Sydney Metro Construction (Rail) Plan (which is consistent with the Airport Plan Variation and EIA Chapter 4):

- 3.3 km of twin rail tunnels (including tunnel portal) within Western Sydney International (SBT)
- Three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Station (SBT)
- Two new metro stations, Airport Business Park (ABP) Station and Airport Terminal (ATL) Station
- A spoil stockpile area.

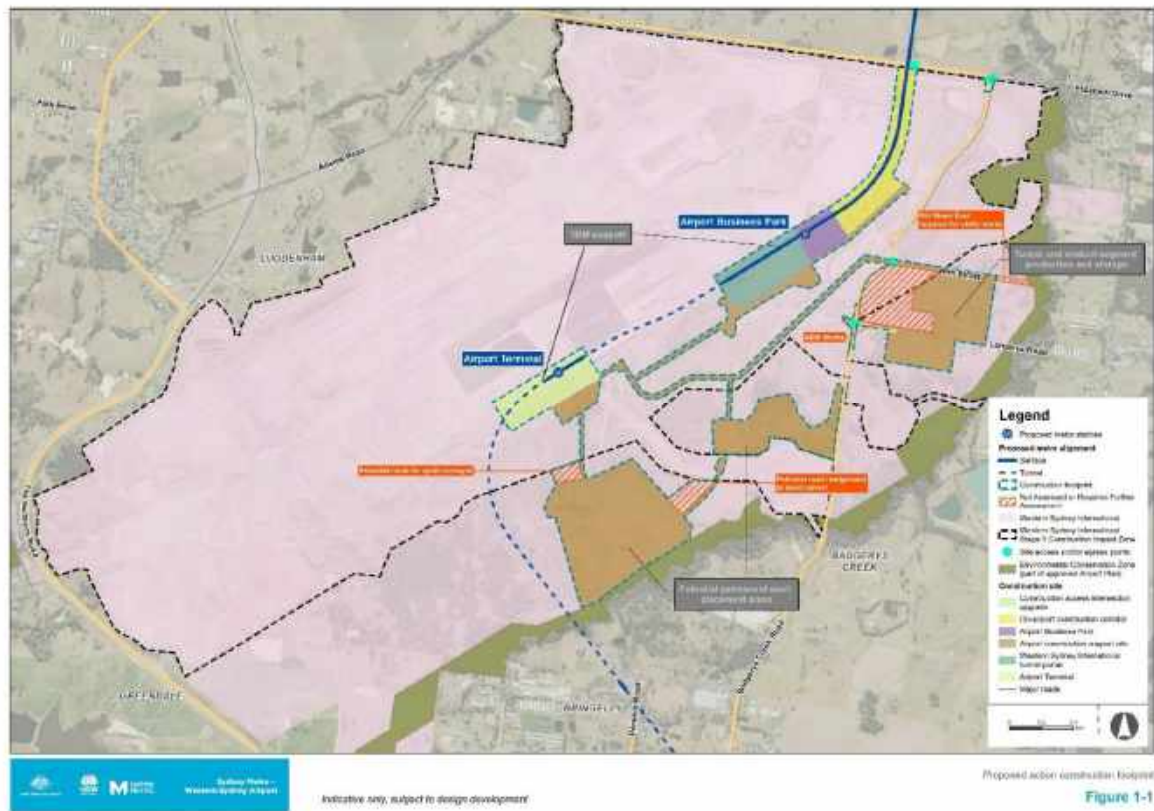


Figure 2: On-Airport Site Layout (Rail Construction Impact Zone)

1.3. Construction Methodology

Water is generated during tunnelling operations from groundwater ingress, process water from the tunnel boring machines (TBM) and routine wash down activities. This water is treated by the WTPs at the CPBG On-Airport sites. The treated tunnel water is transferred via an enclosed pipe and is proposed to be discharged directly into Badgerys Creek at the creek tie-in adjacent to WSA Detention Basin DB3 (Figure 3). An overview of works at each SBT Worksite is provided in Table 1.

Table 1: SBT Worksite overview

Jurisdiction	Worksite	Indicative scope of works
NSW	St Marys	<ul style="list-style-type: none"> • Demolition of existing industrial premises • Offices, amenities, car parking and access roads • Piling and Station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval



Jurisdiction	Worksite	Indicative scope of works
NSW	Claremont Meadows	<ul style="list-style-type: none"> • Offices, amenities, car parking, and access roads • Piling and Services facility shaft excavation using ripper and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval)
NSW	Orchard Hills	<ul style="list-style-type: none"> • Demolition of existing buildings and removal of septic tanks • Offices, amenities, car parking, and access roads • Lansdown Road construction of the permanent road bridge. • Piling and portal, station box and dive excavation • Construction of cast-in-situ permanent portal structure • TBM assembly, launch and tunnelling support works • Cross passage construction support
On-Airport	Airport Portal Dive Structure	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support
On-Airport	Airport Terminal and TBM shaft	<ul style="list-style-type: none"> • Offices, amenities car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support
On-Airport	Primary Spoil Reveal	<ul style="list-style-type: none"> • Access road • Earthworks in accordance with Sydney Metro Specifications
NSW	Bringelly	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and Services facility shaft using rippers and rock hammers • Construction of part of the cast-in-situ permanent shaft. • Cross passage construction support • Invert construction support (subject to Sydney Metro approval)
NSW	Aerotropolis Core	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and Station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval

Note: Worksites shown in grey are outside the boundary of Western Sydney International (Nancy Bird Walton) Airport and not regulated under the Commonwealth *Airports Act, 1996* and are outside the scope of this application.

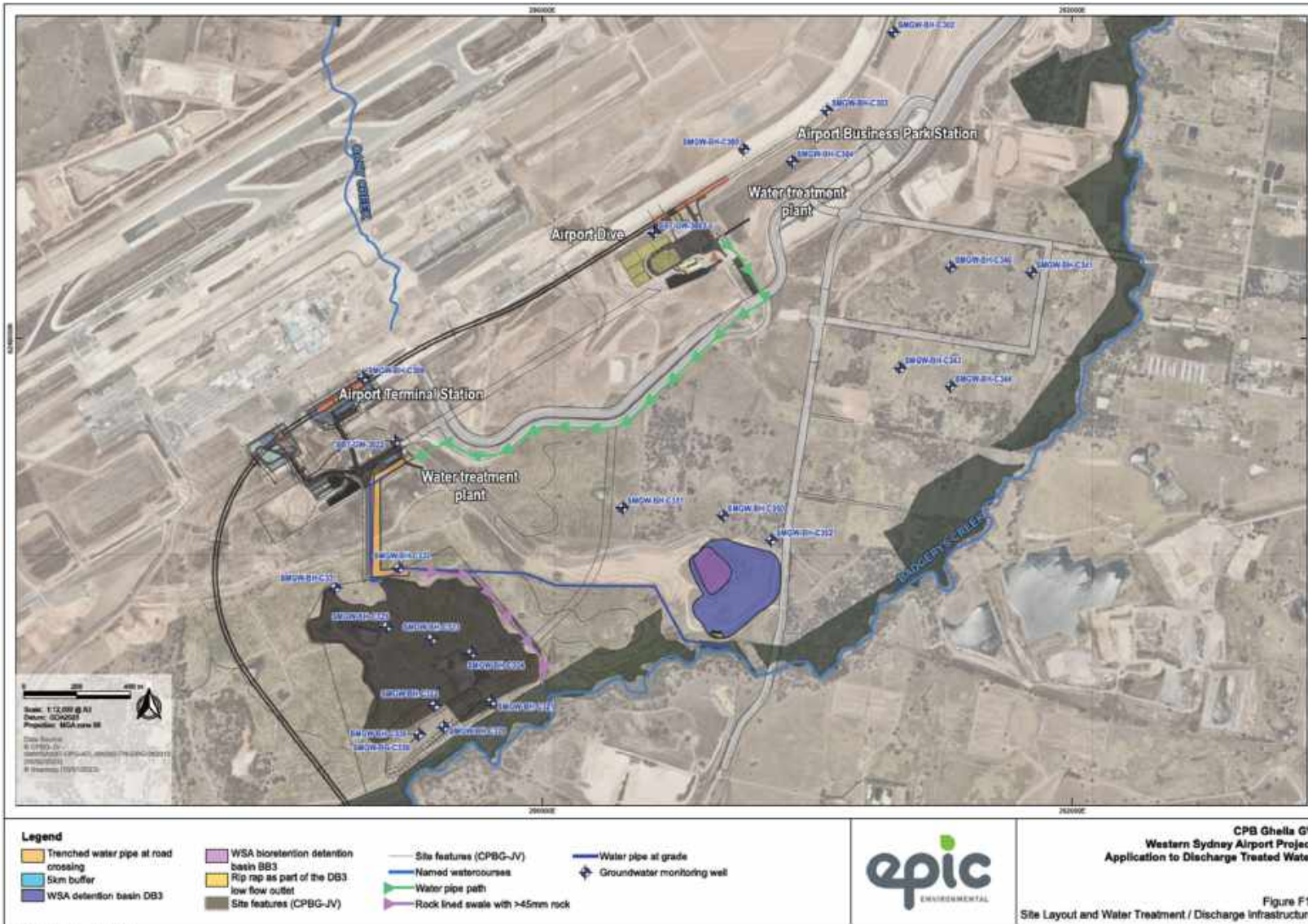


Figure 3: On-Airport Site Layout, Water Treatment Plants, and Wastewater Discharge Infrastructure



1.4. Environmental Management Plan

This application for a variation to the authorisation is supported by an Environmental Management Plan (EMP) (Annexure A) that details the actions that CPBG proposes to take, during the period for which the authorisation has effect. Specifically:

- (a) that CPBG will ensure that pollution emissions overall are not more environmentally damaging than would be the case if exact compliance with the accepted limits mentioned in the Schedules were achieved; or
- (b) if the CPBG believes the outcome described in paragraph (a) can be achieved only by incremental improvements over a greater period of time — to make satisfactory progress toward achievement of that outcome.

In Annexure A of the EMP, Water Treatment Plant Discharge Contingency Management Measures are outlined for a number of scenarios where the treatment, management or discharge does not meet the desired proposed authorisation criteria. The contingency measures listed are measures or disposal options which were assessed as alternative water treatment and disposal options but were determined to be unsuitable for a long-term solution which led to this application. However, while they are unsuitable in the long-term, they are adequate contingencies for the short term until rectification occurs to comply with the authorisation.



2. Authorisation Requirement

2.1. Summary Application Details

Table 2: Applicant Details

Company or Business Name	CPB Contractors Ghella Joint Venture
ABN	53 719 567 430
Representative Name	
Email	
List of any existing permits relating to discharges from site or project	Off-Airport EPL 21672

Table 3: Application Details

Project name	Sydney Metro - Western Sydney Airport – Station Box and Tunnels
Airport	Western Sydney International (Nancy Bird) Airport
Project description (On-Airport)	<ul style="list-style-type: none"> Three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Station (SBT) Two new metro stations, Airport Business Park (ABP) Station and Airport Terminal (ATL) Station Two sections of twin tunnels between Airport Dive and Airport Terminal Station Excavations to enable trains to turn back and stub tunnels to enable future extensions Station box excavations with temporary ground support at Airport Terminal (On-Airport Site). A spoil stockpile area
Construction Methodology (On-Airport)	<ul style="list-style-type: none"> Two double shield TBMs will be launched from the Airport Dive at Airport Business Park (ABP) and tunnel south, traverse the Airport Terminal (ATL) Station Box and Shaft, whereupon tunnelling will stop and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at Airport Terminal Shaft. Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers. It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction.
Project Location	Sydney Metro – Western Sydney Airport – Station Box and Tunnels (Airport Dive to Airport Terminal Station)
Work site location(s)	<ul style="list-style-type: none"> Airport Business Park Portal Dive Structure Airport Terminal and TBM Shaft Primary Spoil Receiving
Work site activities	<ul style="list-style-type: none"> Construction of cast-in-situ permanent dive structure TBM re-launch and tunnelling support works Cross passage construction support
Description of activities relating to authorisation request	Treated construction tunnel water discharges to Badgerys Creek (South Creek Catchment). Treated tunnel process water arising from excavation and tunnelling will be pumped from water treatment plants located at Airport Portal Dive Structure, and Airport Terminal through a closed line to Badgerys Creek.
Accepted limits that are likely to be exceeded requiring application authorisation	Schedule 2 – Water Pollution – Accepted Limits for the following parameters (as described in this application), including: <ul style="list-style-type: none"> Exceedance of accepted limits for: Cr and Zn
Source(s) of effluent	Treated tunnel construction water derived from groundwater inflows from tunnelling of Bringelly Shale, incidental rainfall into excavations, process water for tunnel boring machine (TBM), and washdown water used in tunnels. Treated tunnel construction water will be discharged to Badgerys Creek from the ABP and ATL water treatment plant via DN160 pipe network and rock lined swale upstream of Badgerys Creek (Figure 3).
Treatment of effluent	Construction tunnel water will be treated using treatment processes described in Section 5. Surface water runoff will be managed separately using sediment basins designed in accordance with the Blue Book. Sediment basin discharges are not covered by this assessment.

Effluent discharge point(s)	<p>Badgerys Creek at -33.899700, 150.719494 (approximately 380m southwest of Jagelman Road) West of Elford Group waste storage and recovery site at 320-400 Badgerys Creek Road, NSW, 2555.</p> <p>The drainage network to Badgerys Creek comprises:</p> <ul style="list-style-type: none"> • Pumped discharge (i.e., pressurised flow) from ATL WTP along the pipe. • Discharge directly into Badgerys Creek at the creek tie in adjacent to WSA Detention Basin DB3. <p>Figure 3 provides a map showing the location of the water treatment plants, discharge infrastructure and discharge point to Badgerys Creek (i.e., Outlet of Sediment Basin 3).</p>
Anticipated / actual average and range effluent discharge rate(s) (L/s)	<ul style="list-style-type: none"> • Long term average Airport Portal Dive Structure: 0.68 L/s • Long term average Airport Terminal and TBM Shaft: 0.96 L/s • Total long-term average: 1.6 L/s • Total Short-term average: 4.4 L/s • Total Short-term maximum: 7.3 L/s
Minimum duration required for the authorisation activities	<p>Approximately 12 Months for the period of construction</p> <p>Start Date: Nov 2023</p> <p>End Date: Nov 2024</p>
Details of engagement with any regulatory authorities or agencies	<ul style="list-style-type: none"> • EPL with NSW EPA for Off-Airport discharges to receiving waterways • Trade Waste Agreement with Sydney Water (connection at Claremont Meadows)
Additional Comments	<ul style="list-style-type: none"> • Airport Dive will be a drained excavation during construction only. Permanent structure to be lined and undrained. • Airport Terminal will be a drained excavation during construction and undrained during long term operation (SSTOM contractor will waterproof).



3. Regulations, Conditions of Approval and Existing Licences

3.1. Project Specific Requirements

Table 4: Regulations, Conditions of Approval and Existing Licences

Conditions of approval (Airport Plan)	The rail authority must not: (a) Commence Rail Construction Works until each and all of the CEMPs specified in paragraph (2) have been prepared and approved in accordance with this condition; or b) Carry out any Rail Development inconsistently with any of the approved Rail CEMPs.
	The Rail Authority must prepare and submit to an Approver for approval; (2) (c) a Soil and Water CEMP in relation to the carrying out of the Rail Development
	The criteria for approval of each of the Rail CEMPs are that an Approver is satisfied that (a) The CEMP complies with the mitigation measures and other requirements set out in Table 8-1 and Table 8-3 of the EIA which are relevant to that CEMP; and (b) The Rail Authority, in preparing the CEMP has taken into account any performance outcomes specified in Table 8-2 of the EIA relevant to the CEMP; and (c) the CEMP is otherwise appropriate
Table 8-1 CEMF 3	Groundwater management of on-airport works will be implemented through the groundwater management plan approved as part of the on-airport Soil and Water CEMP. The groundwater quality criteria will be in accordance with Appendix G of the Western Sydney Airport Soil and Water CEMP.
	<p>The on-airport Soil and Water CEMP will detail all the Sydney Metro – Western Sydney Airport soil and water management objectives, including:</p> <ul style="list-style-type: none"> • minimise pollution of surface water through appropriate erosion and sediment control; • minimise leaks and spills from construction activities • maintain existing water quality of surrounding surface watercourses and • source construction water from non-potable sources, where feasible and reasonable.
	<p>The on-airport Soil and Water CEMP will be consistent with the Western Sydney Airport Soil and Water CEMP, including all appendices (and sub plans) to the CEMP. The plan will include as a minimum:</p> <ul style="list-style-type: none"> • soil and water mitigation measures • details of construction activities and their locations, which have the potential to impact on water courses, storage facilities, stormwater flows, and groundwater • surface water and ground water impact assessment criteria consistent with the <i>Airports (Environment Protection) Regulations 1997</i> (with due consideration of the ANZECC guidelines) • management measures to be used to minimise surface and groundwater impacts, including identification of water treatment measures and discharge points, details of how spoil and fill material required by the project will be sourced, handled, stockpiled, reused and managed; erosion and sediment control measures; salinity control measures and the consideration of flood events • a description of how the effectiveness of these actions and measures will be monitored during the proposed works, clearly indicating how often this monitoring will be undertaken, the locations where monitoring will take place, how the results of the monitoring will be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified
Table 8-2 Flooding, Hydrology and Water Quality	No aspect of construction to materially adversely affect existing water quality in receiving waters to a minimum 0.5 EY storm event, or in line with the 'Blue Book' (Managing Urban Stormwater: Soils & Construction Volume 1 (Landcom, 2004))
	<p>Water discharged from the project, including runoff from hardstand areas, surface and ground water storages would:</p> <ul style="list-style-type: none"> • contribute towards achieving ANZECC guideline water quality trigger values for physical and chemical stressors for slightly disturbed ecosystems in lowland rivers in southeast NSW, or • meet any water quality criteria determined in consultation with the NSW Environment Protection Authority (off-airport) where an EPL is required or in consultation with Western

	Sydney Airport in accordance with the Airports (Environmental Protection) Regulations 1997 (on-airport)
	Groundwater availability and quality for water supply and environmental benefit (e.g. groundwater dependent ecosystems) is not affected beyond the requirements outlined in the NSW Aquifer Interference Policy
Table 8-3 Flooding, hydrology and water quality - construction	<p>REMM WQ1:</p> <p>A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International.</p> <p>On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the <i>Airports (Environment Protection) Regulations 1997</i>.</p> <p>The program would monitor all construction discharge locations</p> <p>REMM WQ2:</p> <p>Water treatment plants would be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.</p>
Relevant Legislation and regulations	<ul style="list-style-type: none"> • <i>Airports Act 1996</i> • <i>Airports (Environment Protection) Regulations 1997</i> • <i>Airports (Building Control) Regulations 1996</i> • <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i> • <i>Environment Protection and Biodiversity Conservation Regulation 2000</i> (as amended) (EPBC Regulation) • National Environment Protection (Assessment of Site Contamination) Measure 1999. • PFAS National Environmental Management Plan Version 2.0 • ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia. Available at www.waterquality.gov.au/anz-guidelines • ANZECC & ARMCANZ 2000, Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra. • <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) • <i>Water Act 1912</i> (Water Act) • <i>Protection of the Environment Operations Act 1997</i> (POEO Act) and the <i>Protection of the Environment Operations (General) Regulation 2009</i> (POEO (General) Regulations) • <i>Protection of the Environment Operations (Waste) Regulation 2014</i> • <i>Soil Conservation Act 1938</i> • <i>Water Management Act 2000</i>
Existing Licences	<ul style="list-style-type: none"> • Environmental Protection Licence 21672 (Off-Airport)

3.2. AEPR requirements

In making this application for authorisation, it is necessary to meet the requirements of Division 2, Section 5.09 of the AEPR. Table 5 below shows where these requirements are included in the application.

Table 5: Regulations, Conditions of Approval and Existing Licences

AEPR requirement	Clause	Where addressed
4.01 General duty to avoid polluting	(1) The operator of an undertaking at an airport must take all reasonable and practicable measures:	Project on-airport CEMPs
	(a) to prevent the generation of pollution from the undertaking; or	Section 5



AEPR requirement	Clause	Where addressed
	(b) if prevention is not reasonable or practicable—to minimise the generation of pollution from the undertaking.	Section 5
	(2) The considerations that determine whether a measure is reasonable and practicable include:	Section 5
	(a) the sensitivity of the receiving environment to pollution that the undertaking is capable of generating; and	Section 4 and Section 6
	(b) the nature of the harm that pollution that the undertaking is capable of generating will cause, or has potential to cause; and	Section 7
	(c) the current state of technical knowledge about preventing, or minimising, pollution being generated from an undertaking of the kind being operated; and	Section 5
	(d) all measures that might practicably be used to prevent or minimise the pollution, and the probable benefits and detriments (if any) that should be expected from the implementation of each measure.	Section 5
	(3) Failure to comply with subregulation (1) does not, of itself, constitute a contravention of these Regulations, but compliance may be enforced under regulation 7.01.	Note
4.04 General duty to preserve	(1) The operator of an undertaking at an airport must take all reasonable and practicable measures to ensure that, in the operation of the undertaking, and in the carrying out of any work in connection with the undertaking:	Section 7
	(a) there are no adverse consequences for: <ul style="list-style-type: none"> (i) the local biota and the ecosystems and habitats of native species; or (ii) existing aesthetic, cultural, historical, social and scientific (including archaeological and anthropological) values of the local area; and 	Section 7
	(b) there are no adverse consequences for: <ul style="list-style-type: none"> (i) a species or ecological community listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999; or (iii) sites of indigenous significance on the airport site 	Section 7
5.06 Effect of authorisation	(1) An authorisation authorises the person to whom it applies to observe the general objects of these Regulations by carrying out an act, or an act in the class of acts, or acts in a sequence of acts, mentioned in the authorisation, during the period for which the authorisation has effect.	Note
	(2) For subregulation (1), act includes an omission and a failure to act.	Note
	(1) Application for an authorisation may be made, in writing, to an airport environment officer.	This application
	(2) An application must set out:	
	(a) the name of the applicant; and	
	(b) the name of the airport concerned; and	
	(c) the act, class of acts or sequence of acts, for which the authorisation is sought; and	
	(d) any accepted limit under a Schedule that is intended to be exceeded, and the likely extent of the excess; and	
	(e) the reason why the authorisation is needed; and	
	(f) the period for which the authorisation is needed.	

AEPR requirement	Clause	Where addressed
	<p>(3) An application must be supported by an environment management plan detailing the actions that the applicant proposes to take, during the period for which the authorisation has effect:</p> <p>(a) that the applicant expects will ensure that pollution emissions overall are not more environmentally damaging than would be the case if exact compliance with the accepted limits mentioned in the Schedules were achieved; or</p> <p>(b) if the applicant believes the outcome described in paragraph (a) can be achieved only by incremental improvements over a greater period of time—to make satisfactory progress toward achievement of that outcome.</p>	
5.08 Certain applications to be advertised	<p>(1) An application for an authorisation of any of the following kinds must be advertised in a newspaper that has general circulation in the State in which the airport concerned is located:</p> <p>(a) an authorisation sought for a period longer than 90 days;</p> <p>(b) an authorisation that, if granted, will allow an activity that is likely, in the opinion of the airport environment officer for the airport concerned, to have a significantly adverse material impact on another person;</p> <p>(c) an authorisation that, if granted, will allow an activity that is likely, in the opinion of the airport environment officer, to generate pollution or noise in excess of an accepted limit under these regulations:</p> <p>(i) frequently; or</p> <p>(ii) repeatedly and protractedly.</p>	<p>Advertisement for this variation placed in the Sydney Morning Herald on 27/10/2023</p> <p>Advertisement for the original authorisation placed in the Sydney Morning Herald and the Daily Telegraph on 31/03/2023</p>
	<p>(2) The advertisement must include:</p> <p>(a) the information mentioned in subregulations 5.07(2) in relation to the application; and</p> <p>(b) the name and address of the airport environment officer; and</p> <p>(c) details of the address of a place where, during normal business hours, a copy of the environment management plan mentioned in subregulation 5.07(3) can be examined; and</p> <p>(d) an invitation to make written submissions to the airport environment officer about the application; and</p> <p>(e) mention of a period, being not less than 14 days after the date of publication of the advertisement, within which persons may make submissions.</p>	<p>Advertisement for this variation placed in the Sydney Morning Herald on 27/10/2023</p> <p>Advertisement for the original authorisation placed in the Sydney Morning Herald and the Daily Telegraph on 31/03/2023</p>
	(3) The applicant for the authorisation must pay the reasonable costs of the advertisement, including the cost of preparing the advertisement.	Note
5.09 Determination of application	<p>(1) An application for authorisation must be determined by an airport environment officer by:</p> <p>(a) granting it; or</p> <p>(b) granting it subject to any condition that the airport environment officer considers appropriate; or</p> <p>(c) refusing it.</p>	AEO
	(2) When considering an application, an airport environment officer must take into account:	AEO
	(a) any reasonable alternative actions available to the applicant to achieve the object of the proposed action, including the possibility that the undertaking concerned could be carried out in a different place; and	Section 5.7



AEPR requirement	Clause	Where addressed
	(b) whether the applicant has taken all reasonably available measures to avoid, or minimise, the need for an authorisation; and	Section 5
	(c) all reasonably likely consequences of the proposed action:	Section 7
	(i) for the health, safety, and, if a likely consequence is excessive noise, comfort, of any person; and	N/A
	(ii) for any aspect of the environment; and	
	(iii) if air quality is likely to be adversely affected—for compliance with the ambient objectives mentioned in Part 2 of Schedule 1; and	
	(d) the period of time for which authorisation would, practically, be required; and	Section 1.1
	(e) the adequacy of the environment management plan under subregulation 5.07(3) and the likelihood of the plan being realised; and	Annexure A
	(f) whether the need for an authorisation is to enable remedial work to be carried out on existing airport-sourced pollution; and	N/A
	(g) whether grant of the authorisation would be consistent, or inconsistent, with the objectives and proposed measures set out in the environment strategy; and	Note
	(h) whether grant of the authorisation would have a significant impact on the interests of another person; and	Note
	(i) if, under regulation 5.08, a submission is made about the application—the submission; and	Note
	(j) any other matter that the airport environment officer considers to be relevant.	Note
	Note: A decision under this provision may have to take account of an environmental impact statement or public environment report, if any, under the Environment Protection (Impact of Proposals) Act 1974: see s. 8 of that Act.	Note
	(3) When considering the appropriateness of a conditional grant, the airport environment officer must:	Note
	(a) take into account any commitment that the applicant has given to prevent or minimise pollution or noise of the kind to which the authorisation will apply; and	Note
	(b) prefer, if practicable, a decision that will promote improved compliance by the applicant with these Regulations after the authorisation, if granted, ceases to have effect.	Note
5.14 Notification to airport-lessee company	Before the end of 2 days after granting a person an authorisation under this Part, an airport environment officer must: (a) make a written record of the authorisation; and (b) give a copy of the authorisation to the airport-lessee company for the airport concerned	Note
5.16 Authorisations may be varied and revoked	(1) Whether or not a request is received under subregulation (2), an airport environment officer, if satisfied that in all the circumstances it is proper to do so, may vary or revoke an authorisation.	AEO
	(2) An authorisation holder may request an airport environment officer, in writing, to vary the authorisation	This application
	(3) The request must set out: (a) the act, or the class of acts, for which the variation is sought; and (b) the reason why the variation is needed; and (c) the period for which the variation is needed.	This application
	(4) A variation or revocation that: (a) is notified to the authorisation holder orally; and	AEO

AEPR requirement	Clause	Where addressed
	(b) is declared by an airport environment officer to take effect immediately, in order to deal appropriately with an emergency; has effect only until the end of 48 hours after notification, unless notification is also given in writing before the end of that period.	
	(5) Except as provided by subregulation (4), a variation or revocation is not effective until it is notified in writing to the authorisation holder.	Note
	(6) In proceedings against a person under these Regulations, the fact that an authorisation has been varied or revoked must be disregarded if: (a) the person is not the authorisation holder; and (b) it is established that the person did not know, and could not reasonably be expected to have known, that the authorisation has been varied or revoked.	Note
	(7) Regulations 5.08, 5.09 and 5.14 apply to a variation of an authorisation as if it were a grant of an authorisation.	Note



4. Water Quality Objectives

This section (Table 6) summarises the relevant water quality objectives (WQOs) that are applicable to Badgerys Creek for this variation.

Table 6: Water Quality Objectives

Environmental Objective	Relevant WTP Treatment Processes / Limitations	Risk to Water Quality Objective
Visual Amenity	Treatment processes will reduce turbidity, enhance clarity, remove oils and petrochemicals, and any debris or litter prior to discharge.	Very Low
Primary Contact Recreation	Treatment processes will reduce turbidity, enhance clarity prior to discharge. Faecal coliforms and enterococci are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes.	Very Low
Secondary Contact Recreation	Treatment processes will reduce turbidity, enhance clarity prior to discharge. Faecal coliforms and enterococci are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes.	Very Low
Aquatic Foods	Treatment processes will reduce concentrations of contaminants, salinity and buffer pH to the adopted default guideline values prior to discharge. Faecal coliforms are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes.	Very Low
Irrigation Water Supply	Treatment processes will reduce concentrations of contaminants, and turbidity. Coliforms are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes.	Very Low
Livestock Water Supply	Treatment processes will reduce concentrations of organic / inorganic contaminants, turbidity, and salinity, and buffer pH to the adopted default guideline values prior to discharge. Coliforms are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes.	Very Low
Drinking Water Supply	Treatment processes will reduce concentrations of contaminants, turbidity, and salinity, and buffer pH. Coliforms and Faecal Coliforms are not expected at significant concentrations in groundwater, however, are likely to be reduced by treatment processes. It should be noted that WTPs have not been specifically designed for the purpose of treating water to potable water supply standards for human health, and as such are not required to meet potable water standards.	Not Considered

5. Water Management

This section outlines:

- Project construction activities with the potential to affect the water quality of Badgerys Creek
- Sources of influent to the water treatment plants that discharge to Badgerys Creek
- Water treatment processes that are used to mitigate water quality risks to Badgerys Creek
- The flow rate and water quality profile of effluent discharged from the water treatment plants
- A review of the potential improvements that could be made to the treatment processes and their associated limitations.

5.1. Construction activities

Construction activities within the SBT South on-Airport Study Project area will include:

- Airport Business Park Station, Airport Dive, Airport Terminal Station
- Tunnelling using a tunnel TBM between Aerotropolis Core, Bringelly and Airport Terminal. Tunnelling from the Airport Business Park will progress to Aerotropolis station.

Water collected from tunnelling operations is collected and discharged to the Airport Business Park WTP where the incoming water is treated.

5.2. Sources of Inflow to Water Treatment Plants

Inflows to the ABP and ATL WTPs comprise:

- Groundwater inflows from the station excavation
- Groundwater inflows from tunnel construction
- Process water for tunnelling operations
- Washdown water from tunnelling activities, specifically grout
- Washdown water from surface works

Daily inflow volumes for groundwater, process water, washdown water and incidental rainfall are highly variable over the course of the construction activities in response to both progression of the project and natural variability.

Incidental rainfall into excavations is unlikely to generate significant volumes of additional inflow to WTP, with most stormwater captured and treated through stormwater management systems. Additional inflows from rainfall will be highly variable in response to variable intensity-duration and antecedent soil conditions. However, additional inflows from rainfall are considered unlikely to exceed the treatment capacity of the WTP.

Reasonable worst case and average inflow rates are detailed in Table 7 and Table 8 respectively. The end of the Authorisation is believed to be in November 2024. Inflow rates predicted in Table 7 and Table 8 are based for when both the TBM is progressing and cross-passages are being constructed. From April 2024, it is believed that the TBM retrieval will be in progress and cross-passages will be constructed, therefore flow rates from April 2024 will reduce. An indicative construction program is shown in Table 9.

Table 7: WTP averaged construction stage inflow rates - Reasonable Worst-Case Scenario

Site Location	Estimated Groundwater Inflows (L/s)	Average Process Water Inflows (L/s)	Average Rainfall Inflows (L/s)	Total Outflow (L/s)	Estimated Duration of Operation (months)
Airport Portal Dive Structure and Airport Terminal and TBM Shaft	2.6	4.0	0	6.6	13



Table 8: WTP average construction stage inflow rates – Average Conditions Scenario

Site Location	Estimated Groundwater Inflows (L/s)	Average Process Water Inflows (L/s)	Average Rainfall Inflows (L/s)	Total Outflow (L/s)	Estimated Duration of Operation (months)
Airport Portal Dive Structure and Airport Terminal and TBM Shaft	1.25	4	0	5.25	13

Table 9: Indicative construction program from TBM and cross-passages

Activity	Nov. 23	Dec. 23	Jan. 24	Feb. 24	Mar. 24	Apr. 24	May 24	Jun. 24	Jul. 24	Aug. 24	Oct. 24	Nov. 24
TBM construction												
Cross passage												

5.3. Groundwater Quality

The physical and chemical characteristics of groundwater have been derived from groundwater samples recovered from boreholes located along the Project alignment. Samples of groundwater have been collected on a regular basis from Groundwater quality monitoring was undertaken by Cardno between May and December 2021 from boreholes located along the length of the Project. For the purpose of assessing discharge impacts, the groundwater monitoring network and results from groundwater monitoring have been sub-divided into boreholes located within the following Project areas:

- Airport Business Park Station
- Airport Drive
- Airport Terminal Station.

The concentrations of Cr and Zn in groundwater samples relevant to the WTPs are shown in Table 10.

Table 10: Local Groundwater Quality (at Tunnel Depth)

Parameter	Unit of Measure	AEPR limit	No. of samples	Min	Median	Average	95 th percentile
Chromium (total) – filtered	µg/L	10	278	1	2	5	16.5
Chromium VI – filtered	µg/L	10	41	<10	<10	<10	<10
Zinc – filtered	µg/L	5.0	278	5	25	52	152

5.4. Existing WTPs Processes

Tunnel inflows, TBM process water, and water from routine wash down activities of tunnelling plant and machinery is conveyed to the on-airport construction water treatment plants (WTPs) located at Airport Dive and Airport Terminal Station. These construction stage WTPs have been designed to treat the combination of tunnel inflows and TBM process water prior to discharge. The wastewater treatment processes have been selected to remove a range of contaminants that have been identified in groundwater along with the likely contaminants associated with tunnel construction and TBM operation.

The construction wastewater treatment processes adopted at Airport Dive and Airport Terminal Station are summarised in Table 11.

Table 11: On-Airport Water Treatment Plant Features, Processes and Functions

Feature	Process / Function
Feed Screen	Pretreatment primary solids removal – First order reduction of suspended solids and suspended contaminants
Feed Silos	Pretreatment solids removal for water clarification
Reaction Tank	Reaction tank is designed to provide a controlled environment for chemical reactions, such as coagulant and pH corrections
Lamella Settlers	Separation of solid particles from water using inclined plates or modules
Media Filter Feed Tank	Introducing chemicals or treatment agents to aid future treatment processes
Media Filters	Removal of suspended particles, debris, and impurities from water. The media filters are filled with a chemically enhanced zeolite adsorption media, CAC Organoclay
Activated Carbon Feed Tank	Storage of influent and introducing activated carbon into the treatment system
Activated Carbon Filters	Removal of organic compounds, tastes, odours, and some analytes from the influent
Discharge Tank	Collection and storage of treated effluent before it is discharged into the environment
Recycle Tank	Collection and storage of treated effluent to be reused for construction operations
Offsite Disposal Tank	Collection and storage of treated effluent that must be transported and disposed offsite
Filter Press & Sludge Storage	Filter press is designed to separate and remove liquid from sludge; and storage of sludge
Chemical Storage and Dosing Tanks	Storage, mixing, and accurately dispense of chemicals into the reaction tank

Despite these treatment processes, complete removal of all contaminants from the influent to concentrations below the environmental limits is not practical for all contaminants of potential concern due to technical limitations of modern water treatment technologies when adapted to construction purposes.

5.5. Influent and Effluent water quality

Influent and effluent water quality for the ABP WTP has been monitored and recorded from May 2023 to September 2023. A statistical summary of the monitoring results is provided in Table 12 and Table 13. Time-series plots of influent and effluent concentrations are shown in Annexure E. The following information is relevant to interpretation of the data:

- Samples collected from the WTP were not field filtered prior to laboratory testing, as such the reported concentrations of contaminants reflect total concentrations (dissolved and particulate) instead of the bio-available (dissolved) fractions.
 - Additional testing of influent and effluent is currently being undertaken where the samples are filtered prior to testing
- Existing treatment processes at the WTP are reducing the influent concentrations, but not at a concentration sufficient to meet the existing AEPR limits

Table 12: Influent Water Quality

Analyte	Unit	AEPR limit	No.	Min.	Median	Average	95th percentile	Max.
Chromium	µg/L	10	8	2	81	109	307	362



Analyte	Unit	AEPR limit	No.	Min.	Median	Average	95th percentile	Max.
Chromium VI	µg/L	10	7	20	90	89	177	200
Zinc	µg/L	5	8	1	54	715	3038	3940

Red text relates to an exceedance of the Airport Regulations Accepted Fresh Water Limits

Table 13: Effluent Water Quality

Analyte	Unit	AEPR Limit	No.	Min.	Median (50 th percentile)	Average	80 th percentile	95 th percentile	Max.
Chromium	µg/L	10	15	1	32	47	59	165	207
Chromium VI	µg/L	10	14	10	30	49	67	156	180
Zinc	µg/L	5	15	1	27	24	32	37	41

Red text relates to an exceedance of the Airport Regulations Accepted Fresh Water Limits

5.6. Potential Sources of Elevated Chromium / Zinc in the Influent

Raw influent water quality data for the WTPs shows concentrations of Cr and Zn in feedwater exceeding the existing AEPR limits on a variable basis. Annexure E show influent concentrations (from grab samples) over time.

A review of the groundwater data from boreholes in the Airport groundwater capture zone shows that the high concentrations of Zn in influent are potentially associated with groundwater derived from the geological material through which the TBM is advancing, and may also be associated with the grout accelerant used in the TBM operations

Elevated concentrations of Cr may be associated with a combination of factors including:

- The Cr content of the grout mixture used in TBM operations to seal fractures and concrete rings
- Cement in the process water
- Oxidation of naturally occurring chromium that is widely present as Cr III in buried geological materials as a result of oxygen subsurface conditions

Oxidation of naturally occurring Cr III to Cr VI is likely to occur both from a combination of mechanical crushing and exposure of the geological units along with changes in pH through contact with high pH cement grouts used in tunnelling. Fluidisation and suspension of geological materials and the high pH grout within the process water slurry output from TBMs may result in a solution with both elevated concentrations for dissolved and suspended loads of Cr VI. This slurry is subsequently conveyed to the ATL WTP. The Eh-pH (Pourbaix) stability diagram for forms of chromium present at varying oxidation states and pH conditions is presented to support this interpretation.

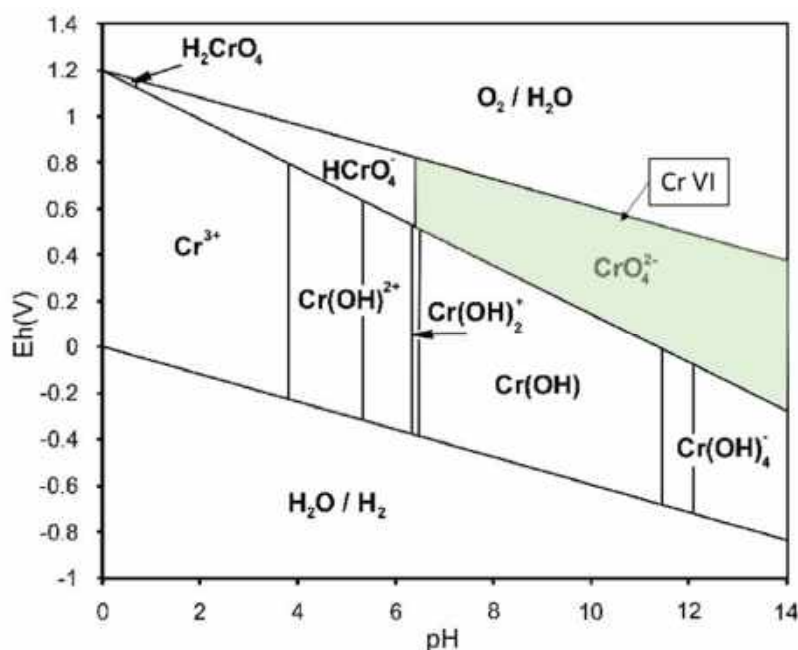


Figure 4: Eh-pH (Pourbaix) stability diagram for the speciation of chromium¹

5.7. Assessment of Additional Water Treatment Options

CPBG has considered a number of options for managing and treating the water resulting from tunnelling and station box excavation activities, as discussed in Table 14. Previous reports have detailed potential additional / replacement options for the reduction of salinity and nutrients. This assessment provides a review of the additional / replacement water treatment processes that can be used for the reduction of metals including Cr and Zn and their practical limitations / appropriateness for the treatment of construction water generated from the project.

Table 14: Potential Treatment Technology Review

Option	Description	Project Specific Practical Limitations
Membrane Technology	Reverse osmosis (RO) is considered one of the most robust membrane technologies for the removal of a range of contaminants including Cr and Zn. Removal rates can vary between 60% and 100% depending on a range of factors. The RO process generates two products after treatment comprising "permeate" (treated water that has passed through the membrane) and "concentrate" (reject water that has been filtered by the membrane).	The significant cost and energy requirements associated with RO treatment technology, along with high risk of failure due to variable feedwater quality were both considered as major limitations / risks associated with adopting RO as a wastewater treatment solution. The production of highly saline brines (i.e., concentrate) was also identified as a major limiting factor due to the high volume of brine and lack of available and practical disposal options.
Chemical Precipitation	Coagulation and chemical precipitation can be used in the removal of Cr and Zn from suspension and solution. A range of chemical coagulants are available to facilitate removal of these metals including Fe(II) sulfate, sodium	There are a range of practical limitations in the coagulation-precipitation removal process for metals including Cr and Zn. The process of chemical coagulation is ineffective for metals in complex form or present as ions in solution.

¹ Jeřábková, Julie & Tejnecký, Václav & Boruvka, Lubos & Drabek, Ondrej. (2018). Chromium in Anthropogenically Polluted and Naturally Enriched Soils: A Review. Scientia Agriculturae Bohemica. 49. 297-312. 10.2478/sab-2018-0037.



Option	Description	Project Specific Practical Limitations
	bisulfite, sodium metabisulfite, sulfur dioxide or zero-valent iron.	Additionally large settling basins with long holding times are required for smaller colloids to precipitate and settle, which is not practical for the project due to the high feedwater rates and limited available space for the WTPs.
Ion Exchange	USEPA recommends ion exchange as the best available technology (BAT) for removal of heavy metals including Cr and Zn when low concentrations are present in small systems. A number of anionic and cationic exchange resins are available for targeted removal of metalloid contaminants. Ion exchange systems are typically adopted for the targeted removal of contaminants where the salinity and flow rates of feedwater are low (e.g. electroplating operations).	The practicality of incorporating ion exchange processes for the project is limited by the high feedwater flow rates, and high salinity of the feedwater. Both factors significantly reduce the efficacy and longevity of the ion exchange processes resulting in the need for regular regeneration or replacement of ion exchange media due to fouling and/or depletion, and disposal of brine concentrate. Long lead times and the significant operational and environmental cost of replacing ion exchange media also presents a practical limitation to adopting this technology on the project.
Adsorption	Adsorption processes can be used to remove metals from solution when it is not possible to remove them using other treatment measures. A range of adsorbents are available for the removal of metals from solution, including those that are currently adopted by the project. Iron-oxide coated sands (IOCS) and manganese-oxide coated sands (MnOCS) have both been studied by researchers at the laboratory scale for their effectiveness at removing Cr and Zn.	Adsorbent materials have a finite adsorption capacity, and they become saturated with contaminants over time. When the adsorbent is saturated, it must be regenerated or replaced, which can be costly and produce waste. High concentrations of other ions in the water may compete with Cr VI and Zn adsorption. The pH of the water can affect the adsorption capacity and efficiency of the adsorbent. Some adsorbents work optimally in specific pH ranges. The disposal of spent adsorbent materials, particularly when they contain hazardous contaminants, must comply with environmental regulations, which can be costly and complex.
Biological Removal	Some microorganisms, like certain strains of bacteria, can reduce Cr VI to Cr III through biological processes. Bioremediation methods can be used to harness these microorganisms to treat contaminated water. Biological removal methods for zinc from water involve the use of microorganisms, primarily bacteria, to facilitate the conversion or precipitation of soluble zinc ions (Zn^{2+}) into less soluble forms or to accumulate zinc within microbial biomass	Biological processes can be relatively slow compared to some chemical or physical treatment methods. The removal depends on the growth and metabolic activity of the microorganisms involved. This may necessitate larger treatment volumes and longer contact times. In addition, the success of biological removal methods can depend on the specific water chemistry, microbial strains, and operational conditions.

5.8. Discharge

The on-airport WTPs discharge treated effluent (via an enclosed pipe) to Badgerys Creek at the creek tie in adjacent to the WSA Detention Basin DB3 (approximately 380 m southwest of Jagelman Road) (Figure 3).

The key environmental considerations associated with management of WTP discharge water was determined to be the potential erosive impact from the discharge and potential impacts to water quality. The pipeline route was assessed for heritage, ecology and contamination separately and found to not be impacting any sensitive areas.

In order to prevent scouring of channels by high velocity flows, discharges from WTPs are to be managed in accordance with best practice guidelines and site-specific management plans. Discharges will be made at the creek tie-in adjacent to Sediment Basin 3. The creek tie-in has been designed and constructed by WSA Co co-contractors to capture water from the airport, including the Airport Business Park (ABP) and Airport Terminal (ATL) sites. The outfall and the Badgerys Creek bed and banks have been reinforced with rock gabions and extensive riprap through that section of the creek. The release point will be through a perforated sock to further dissipate the flow. The CPBG pipeline (described above) will divert water from Sediment Basin 3 and discharge directly to the creek tie-in. Given that the volume of water being discharged to the creek tie is unchanged from that proposed for Sediment Basin 3, the design parameters of the creek outfall remain valid to minimise impacts on this section of the creek.

Table 15 and Table 16 provides a summary of the discharge point and discharge rate from the WTPs. The end of the Authorisation is believed to be in November 2024. Outflow rates are based for when both the TBM is progressing, and cross-passages are being constructed. From April 2024, it is believed that the TBM retrieval will be in progress and only remaining cross-passages will be constructed, therefore outflow rates from April 2024 will reduce. An indicative construction program is shown in Table 9 above in Section 5.2.

Table 15: WTP averaged construction stage outflow rates – Reasonable Worst-Case Scenario

Site Location	Contributions to effluent discharge	Discharge point	Total Outflow (L/s)	Estimated Duration of Operation (months)
Airport Portal Dive Structure and Airport Terminal and TBM Shaft	Groundwater inflows, incident rainfall, washdown water, process water	Badgerys Creek	6.6	13

Table 16: WTP average construction stage outflow rates – Average Condition Scenario

Site Location	Contributions to effluent discharge	Discharge point	Total Outflow (L/s)	Estimated Duration of Operation (months)
Airport Portal Dive Structure and Airport Terminal and TBM Shaft	Groundwater inflows, incident rainfall, washdown water, process water	Badgerys Creek	5.25	13

6. Baseline Environmental Conditions

This section outlines the current state of Badgerys Creek which is located in the South Creek catchment and is the receiving environment into which this variation to the authorisation is proposing to discharge. Information provided includes the location of the discharge point, waterway condition including flows, water quality, ecosystem condition, and influencing factors on the current state of the waterway. A summary of the baseline environmental conditions is shown in Table 17.

Table 17: Baseline Environmental Conditions of Badgerys Creek

Local drainage catchment	<ul style="list-style-type: none"> South Creek Catchment
Surface geology	<ul style="list-style-type: none"> Residual Soil Bringelly Shale
Hydrogeological landscape	<ul style="list-style-type: none"> Upper South Creek HGL
Receiving waterway(s)	<ul style="list-style-type: none"> Badgerys Creek at -33.899700, 150.719494 (approximately 380m southwest of Jagelman Road). West of Elford Group waste storage and recover site at 320-400 Badgerys Creek Road, NSW, 2555.
Hydrological conditions	<ul style="list-style-type: none"> Perennial to intermittent under drought conditions



Ambient flow rates (m³/s)	<ul style="list-style-type: none"> Calibrated flow statistics have been calculated for Badgerys Creek based on WaterNSW Elizabeth Drive reference Site (Site 21320) (Error! Reference source not found.) Flows typically range from between 0.2 L/s (Q20) to 15.8 L/s (Q80) with a median of 2.05 L/s (Q50).
Ecosystem condition	<ul style="list-style-type: none"> Highly modified and has previously been subject to extensive land clearing for agricultural and urban land use. Badgerys Creek is a moderately sensitive key fish habitat (KFH).
Water quality objectives	<ul style="list-style-type: none"> Protection of aquatic ecosystems Visual amenity Primary contact recreation Secondary contact recreation Irrigation water supply Livestock water supply
Groundwater contaminants	<ul style="list-style-type: none"> Groundwater from the tunnel depth elevated against AEPR criteria for nitrogen, phosphorus, ammonia and heavy metals
Key land degradation issues	<ul style="list-style-type: none"> Saline scalds Sheet erosion Locally severe salt scalding and associated gully erosion along drainage depressions Fluvial erosion

6.1. Surface Water Flows

There are two project specific flow gauges have been used to determine flow rates within Badgerys Creek, shown in Figure 5. These comprise:

- SW01: Upstream of the discharge point of Badgerys Creek
- SW03: Downstream of the discharge point of Badgerys Creek



Figure 5: Airport surface water and groundwater monitoring locations

Stream flow data has been collected from March 2020 to September 2023, with collated flow statistics shown in Table 18.

Table 18: flow statistics for SW01 and SW03

Site	Minimum (L/s)	20 th percentile (L/s)	Median (L/s)	Average (L/s)	95 th percentile (L/s)	Maximum (L/s)
SW01 (upstream)	0.9	2.5	7.2	18.1	55.1	946.3
SW03 (downstream)	0.0	65.9	74.9	109.5	253.6	2392.8

The results presented in Table 18 shows that flows in Badgerys Creek (upstream of the discharge point) typically range from between 2.5 L/s (20th percentile, Q20) to 55.1 L/s (95th percentile, Q95) with a median of 7.2 L/s. It is noted that there are no Water Access Licences within Badgerys Creek.

6.2. Surface Water Quality

Within the Airport Plan, Badgerys Creek is identified as an Environmental Conservation Zone. While this status has been considered in this assessment, it is noted that the Badgerys Creek catchment is a highly modified ecosystem. Surface water data for Badgerys Creek has been collected from January 2023 to May 2023 for a select number of analytes. Table 19 shows the concentration data for Cr VI and Zn only as these are the subject of the variation application.

Table 19: Local Surface Water Quality – Badgerys Creek

Parameter	Unit of Measure	AEPR Limit	Count	Min.	Median	Average	95 th percentile	Max
Cr VI	µg/L	10	40	<10	<10	<10	<10	<10
Zn	µg/L	5.0	40	5	9	13	24	25

Notes

1. Red texts indicates an exceedances against Airport Regulation Accepted Freshwater Limits
2. Data was obtained from sampling locations SBT4 and SBT9 (Upstream, at point, and downstream) which are located around the discharge point.

The information available from baseline monitoring of Badgerys Creek shows that the ambient concentration Cr VI were between 1 and 10 µg/L (accounting for variable limits of detection on reporting), and ambient concentration for Zn were between 5 and 25 µg/L.

6.3. Aquatic Ecology

Annexure B comprises three technical reports regarding the aquatic ecology within Badgerys Creek:

- Annexure B1: Baseline Aquatic Ecology Survey, completed by Aquatic Ecological Investigations (AEI), November 2022. The objectives of this report were to:
 - Survey aquatic macroinvertebrate and fish assemblages paired with in situ surface water quality sampling at the established sampling sites with South Creek, Badgerys Creek, Claremont Creek, and Thompson Creek.
 - Assess environmental condition at each site based on a variety of ecological indices.
- Annexure B2: Badgerys Creek Aquatic Ecology Tech Memo, completed by Stantec, May 2023. The objective of this Tech Memo was to:
 - Undertake an aquatic ecology assessment along a portion of Badgerys Creek to inform a Water Discharge Application
- Annexure B3: Eastern Long-necked Turtle in Badgerys Creek Tech Memo, completed by Stantec, May 2023. The objective of this Tech Memo was to:
 - Determine the impact of the discharge to the Eastern Long-necked Turtle

As part of the scheme, Eastern long-necked turtles have been relocated to Badgerys Creek.

6.3.1 Aquatic Habitat



AEI identified that the aquatic habitat of Badgerys Creek is

“highly modified and has previously been subject to extensive land clearing for agricultural and urban land use. The majority of sampled locations displayed evidence of recent flooding, including presence of scour and debris.

In general, the riparian vegetation is commonly dominated by invasive species, with the exception of occasional Casuarina spp. And Eucalypt. Trees, Lomandra longifolia (Spiny-head mat-rush) and Persicaria decipiens (Slender knotweed).

The overall condition of aquatic habitat at the sites sampled was classified as ‘fair’, with RCE scores of between 25 and 35. Nevertheless, the presence of Anguilla reinhardtii (Long-finned eel) and Anguilla australis (Short-finned eel) and Gobiomorphus australis (Striped gudgeon) indicates that creeks within the study area are providing habitat for native species of fish.”

Stantec identified that the aquatic habitat of Badgerys Creek is

“Overall, the aquatic habitat within waterbody inspected during the field survey was considered fair given the context of the location and the level of background disturbance. The habitat present at all sites is considered Class 2, Type 2 Moderately Sensitive Key Fish Habitat (KFH).”

6.3.2 Fish

All the species caught during the AEI study were common within NSW (McDowall, 1996; Howell and Creese, 2010). *“No threatened species of fish listed under the NSW FM Act or the Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act) were observed”.*

A total of five native species of fish were identified during the survey, comprising *“Firetail gudgeon (Hypseleotris galii), Western carp gudgeon (Hypseleotris 20ccelerant20), Australian smelt (Retropinna semoni), an un-identified Gudgeon species, and Long-finned eels) and three alien species (Goldfish (Carassius auratus)”*. Common carp (Cyprinus carpio) and Mosquito fish were recorded by the survey undertaken by GHD (2016), with Gambusia holbrooki (mosquito fish) also observed during the AEI (2022) investigation.

Stantec identified

“two native fish; Flathead Gudgeon were caught. The pest species Eastern Gambusia was ubiquitous which was expected due to its tolerance to poor water quality and prevalence throughout disturbed NSW streams.”

6.3.3 Aquatic Macroinvertebrates

The macroinvertebrate communities present in South Creek were noted to have a high tolerance to severe pollution levels but included two threatened invertebrate species listed by the Fisheries Management Act, Adam’s Emerald Dragonfly and the Sydney Hawk Dragonfly.

For Badgerys Creek, “Moderate to Severe” pollution was determined from the SIGNAL 2 (a method to assess ecological quality of the sites by using different pollution levels of different macroinvertebrates). This indicates that South Creek is likely to be exposed to toxic pollution or harsh physical conditions, such as flooding. Floods can wash macro-invertebrates away, so that few types are collected if sampling occurs soon after the flood has receded. This survey was done after recent flood events, which is likely to have contributed to the lower diversity recorded at the sites sampled.

6.4. Species Sensitivity to Analytes

The Default Guideline Values (DGVs) for Cr VI in Freshwater are based on a

“total of 222 chronic data points, comprising 7 taxonomic groups, including:

- Fish: 13 species, 84 to 35,314 µg/L. The lowest figure was from a chronic LC50 for channelfish, Nuria danrica, to give a NOEC of 61 mg/L.*
- Crustaceans: four species, 2.8 µg/L (C. dubia) to 50,000 µg/L (D. carinata). The lowest figure was from a chronic LC50 for C. dubia.*
- Rotifer: one species, Philodina roseola, 880 to 6200 µg/L (range).*

- *Algae, diatoms and blue-green algae: nine species, 0.1 (Stephanodiscus sp.) to 600 µg/L Chlorella vulgaris). Most species had means >30 µg/L. A recent Canadian publication (Pawlisz et al. 1997) cited data from around 20 algal species but any additional data could not be included until assessed according to the selection criteria. The trigger value is above the outlying diatom figure but is considered sufficiently protective of most species.*
- *Flagellates: two species, 23 µg/L (Euglena gracilis; from LC50) to 600 µg/L*
- *Macrophytes: two species, 16 µg/L, from an EC50, growth, (Lemna minor) to 920 µg/L (Myriophyllum sp.), from EC50, growth figures.”*

The Default Guideline Values (DGVs) for Zn in Freshwater are based on a

“Total of 85 data points:

- *Fish: 11 species, 24 µg/L (Oncorhynchus tshawytscha; from LC50) to 1316 µg/L (Ptylocheilus oregonensis; from LC50); seven species had geometric means < 250 µg/L and a measured NOEC of 38 µg/L was reported for Pimephales promelas.*
- *Amphibians: one species, Ambystoma opacum, 180 µg/L (from LOEC).*
- *Crustaceans: three species, 5.5 µg/L (C. dubia; from LC50) to 25.3 µg/L (C. dubia), plus a figure of 18,480 for the crayfish Orconectes virillis).*
- *Insect: one species, Tanytarsus dissimilis, 5 µg/L (NOEC).*
- *Molluscs: three species, 54 µg/L (Dreissena polymorpha) to 11,200 µg/L (Vesunio ambigua), a NOEC of 487 µg/L was measured for Physa gyrina.*
- *Annelid: one species, Limnodrilus hoffmeisteri, 560 µg/L (from LC50).”*

Investigations conducted by AEI and Stantec have identified that Badgerys Creek is a highly disturbed catchment with a low biodiversity score. Crustaceans, algae, flagellates, and diatoms that are most sensitive to increased concentrations of Cr VI and Zn were not identified in the aquatic species surveys. The ecology has largely adapted to stressed conditions associated with extensive rural land use and regular flash flooding. It is noted that fish species have a significantly higher no observed effect concentration (NOEC) than the proposed discharge limits for Cr VI.



7. Predicted Effects of Effluent Discharge

This section summarises the impact of the effluent discharge (Cr and Zn) on the receiving waterway (Badgerys Creek).

Reviewing the effluent data, concentrations of Cr and Zn are greater than the AEPR Schedule 2, Table 1 accepted freshwater limits, 10 µg/L and 5 µg/L respectively. Environmental monitoring results indicate that Cr concentrations in Badgerys Creek are below the AEPR accepted limits, but Zn concentrations are above the AEPR limits.

To assess the potential impacts of the proposed chromium and zinc effluent on Badgerys Creek, a direct dilution model and multivariate assessment was completed. The direct dilution model determines the concentration immediately at the point of discharge, which is diluted from flow in Badgerys Creek.

Results from the direct dilution model are shown in Table 20 for reasonable worst-case and average effluent discharge rates respectively. This is considered conservative considering that the effluent flow rate is likely to reduce from April 2024. The maximum identified effluent concentrations were used in the calculations. The modelling identified that concentrations at the discharge point exceeded the AEPR limit and that under median stream flow conditions the mixed concentration was significantly higher than average stream flow conditions. A lower mixed concentration was determined when average case effluent discharge was used compared to worst-case discharge conditions.

Table 20: Estimated Water Quality in Receiving Waterways at discharge point with dilution – average and worst-case discharge

		Receiving Environment				WTP Effluent			Mixed Conc.
	AEPR limit	Simulated Q		Conc.		Discharge Q		Max. Conc.	
Analyt e	µg/L	Scenario	L/s	Type	µg/L	Scenario	L/s	µg/L	µg/L
Cr	10	Average	18.1	Min	0.1	Worst-Case	6.6	200	53.5
				Max	10.0				60.8
				Average	2.0				54.9
				Min	0.1	Average Case	5.25		45.0
				Max	10.0				52.7
				Average	2.0				46.5
		Median	7.2	Min	0.1	Worst-Case	6.6		95.7
				Max	10.0				100.9
				Average	2.0				96.7
				Min	0.1	Average Case	5.25		84.4
				Max	10.0				90.1
				Average	2.0				85.5
Zn	5	Average	18.1	Min	5.0	Worst-Case	6.6	40	14.4
				Max	25.0				29.0
				Average	15.0				21.7
				Min	5.0	Average Case	5.25		12.9
				Max	25.0				28.4
				Average	15.0				20.6
		Median	7.2	Min	5.0	Worst-Case	6.6		21.1
				Max	25.0				32.2
				Average	15.0				27.0
				Min	5.0	Average Case	5.25		19.8
				Max	25.0				31.3
				Average	15.0				25.5

As the direct dilution model has identified that effluent concentrations will be above the AEPR fresh water limits for both Cr and Zn, a dilution multivariate model has been developed to determine whether effluent concentrations will attenuate to the ambient concentration within a nominal mixing zone.

The dilution multivariate model was able to calculate the concentrations at different distances from the discharge point and incorporated the range of concentrations in the effluent and receiving waters. The purpose of a mixing zone, as outlined in ANZECC 2000, is to manage the controlled discharge of soluble non-bioaccumulate toxicants whose impacts on local biota are primarily related to their concentration.

Annexure C shows the concentration of the receiving water at different distances for the following conditions:

- Worst case effluent discharge rate (6.6 L/s) combined with average river flow rate (18.1 L/s)
- Average effluent discharge rate (5.25 L/s) combined with average river flow rate (18.1 L/s)
- Worst case effluent discharge rate (6.6 L/s) combined with median stream flow rate (7.2 L/s)
- Average effluent discharge rate (5.25 L/s) combined with average stream flow rate (7.2 L/s)
- Worst case effluent discharge rate (6.6 L/s) combined with Q20 stream flow rate (2.5 L/s)
- Average effluent discharge rate (5.25 L/s) combined with Q20 stream flow rate (2.5 L/s)

For Cr, the multivariate modelling determined that:

- For **average** stream flow conditions (18.1 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 0 to 13 µg/L using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L
 - Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 1 to 13 µg/L using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L
- For **median** stream flow conditions (7.2 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 1 to 16 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L
 - Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 1 to 15 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L
- For the **Q20** stream flow conditions (2.5 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 1 to 19 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L
 - Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 1 to 18 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Cr concentration ranges from 1 to 10 µg/L

For Zn, the multivariate modelling determined that:

- For **average** stream flow conditions (18.1 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 25 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentration ranges from 5 to 25 µg/L



- Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 25 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentration ranges from 5 to 25 µg/L
- For **median** stream flow conditions (7.2 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 25 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentration ranges from 5 to 25 µg/L
 - Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 25 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentration ranges from 5 to 25 µg/L
- For the **Q20** stream flow conditions (2.5 L/s):
 - Worst Case (6.6 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 26 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentration ranges from 5 to 25 µg/L
 - Average Case (5.25 L/s) effluent discharge rate: Effluent concentrations are attenuated to 5 to 26 µg/L when using a mixing zone of up to four (4) times the stream width. The ambient stream Zn concentrations range from 5 to 25 µg/L

In summary, the multivariate modelling showed that Cr effluent concentrations can be attenuated to 1 to 19 µg/L and Zn effluent concentrations can be attenuated to 5 to 25 µg/L.

7.1. Risks from Cr

The risks associated with elevated Cr, principally in the Cr VI form, to Badgerys Creek is considered to be Low – Moderate due to the following points:

- Cr is likely derived from the combination of cement, grout used to seal fractures and tunnel sections, and Cr naturally present in geological materials
- There are no sustainable treatment solutions at the ATL WTP to remove Cr from treated water prior to discharge
- The dilution modelling, combined with a review of aquatic species assemblages indicates that there is a low risk to aquatic ecosystems, even with higher discharge limits
- Effective discharge controls that consider both the concentration and the total mass of contaminants, combined with in situ dilution and waste treatment, should ensure that the area of a mixing zone is limited, and the environmental values of the waterbody as a whole are not jeopardised

7.2. Risks from Zn

The risks associated with elevated Zn to Badgerys Creek is considered to be Low – Moderate due to the following points:

- Zn is most likely principally derived from the groundwater screened in the geological layers through which the tunnels are being advanced, combined with the grout accelerant used to seal fractures and tunnel sections
- There are no sustainable treatment solutions at the ATL WTP to remove Zn from treated water prior to discharge (Table 14)
- The dilution modelling, combined with a review of aquatic species assemblages indicates that there is a low risk to aquatic ecosystems, even with higher discharge limits
- Effective discharge controls that consider both the concentration and the total mass of contaminants, combined with in situ dilution and waste treatment, should ensure that the area of a mixing zone is limited, and the environmental values of the waterbody as a whole are not jeopardised

8. Proposed Authorisation Limits

Following consideration of all reasonable alternative options, the preferred groundwater treatment method (and the basis of this authorisation application) is to treat the groundwater and process water in a conventional WTP and discharge the treated water into Badgerys Creek. The WTP will

process the tunnel and station box water for all required parameters resulting in water which meets all AEPR requirements, including previous Authorisations apart from Cr and Zn.

Through the consideration of all reasonable alternatives (Section 5) and assessment of the likely consequences of the proposed action (Section 7), CPBG has taken all available measures to avoid and minimise, the need for an authorisation. This application for the variation to the Authorisation is a local solution with minimal environmental and community consequences.

As outlined above, in coming to this conclusion and before proceeding with an application for variation of the authorisation, CPBG has considered the following to determine whether all available measures taken have been reasonable and practical:

- The sensitivity of the receiving environment to pollution that the undertaking is capable of generating (Section 5 to Section 7)
- The nature of the harm that pollution from the undertaking is capable of generating, will cause, or has potential to cause (Section 7)
- The current state of technical knowledge about preventing, or minimising, pollution being generated from an undertaking of the kind being operated (Section 5)
- All measures that might practicably be used to prevent or minimise the pollution, and the probable benefits and detriments (if any) that should be expected from the implementation of each measure (Section 5).

The proposed authorisation limits are detailed in Table 21. An upper limit is proposed for Zn, as well as 80th percentile limits for Cr. These have been based on existing effluent water quality results (Table 13 and Annexure E). Dilution modelling is based on the proposed upper limit and high flow rates, to address the impact from a potential maximum discharge into Badgerys Creek.

Table 21: Proposed Authorisation Limits - Metals

Parameter	Unit of Measure	Airport Regulations Indicator of adverse effect	Proposed Upper Limit for Authorisation	Proposed 80 th percentile limit
Chromium	µg/L	10	-	100
Zinc	µg/L	5	40	-

9. Supporting Information

Table 22 references supporting documentation, plans and licences and approvals applicable to informing and supporting this application.

Table 22: Supporting Information

Monitoring Data	<ul style="list-style-type: none"> • Groundwater Monitoring Plan (Annexure D)
Environmental management plans	<ul style="list-style-type: none"> • Soil and Water Construction CEMP (including groundwater and surface water monitoring programs) • Biodiversity CEMP
Licences and approvals	<ul style="list-style-type: none"> • EPL 21672



10. References

AEI (2022): Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works - Baseline Aquatic Ecology Survey. Report for AMBS. Author: Cummins, S. P.

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Landcom (2004). Managing Urban Stormwater: Soils and Construction. Volume 1. NSW Government, Sydney

WRC (2000): Advisory Notes For Land Managers On River And Wetland Restoration, Rushes and sedges. Water and Rivers Commission.

Annexure A WTP Discharge Environment Management Plan



On-Airport Water Treatment Plant Discharge Environmental Management Plan

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
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Revision	2

Document approval

Rev	Date	Prepared by	Reviewed by	Approved by	Signature
A	17/03/23	■■■■■	■■■■■	■■■■■	■■■■■
0	30/3/23	■■■■■	■■■■■	■■■■■	■■■■■
1	2/06/23	■■■■■	■■■■■	■■■■■	■■■■■
2	25/10/23	■■■■■	■■■■■	■■■■■	■■■■■



Table of contents

Compliance.....	2
Glossary	3
Part A Overview	4
1. Introduction	4
1.1. Purpose and application.....	4
1.2. Plan context.....	4
1.3. Objectives and targets	5
1.4. Plan Structure.....	5
2. Project overview	6
2.1. SBT Works scope (on-airport)	6
2.1.1. Station Boxes and Tunnelling Works.....	6
2.1.2. Construction methodology	6
2.1.3. Water Treatment and Discharge	7
Part B Implementation	8
Element 1: Training.....	9
Element 2: Monitoring.....	10
Element 3: Reporting	11
Element 4: Auditing, review, and improvement.....	15

Table of tables

Table 1: SBT Works overview	6
-----------------------------------	---

Table of figures

Figure 1: On-Airport Planning and Environmental Management System.....	5
Figure 2: On-Airport Site Layout, Water Treatment Plants, and Discharge Infrastructure.....	1

Annexures

Annexure A Water Treatment Plant Discharge Contingency Management Measures.....	1
Annexure B Construction water quality discharge criteria	1



Compliance

No.	Requirement
Airport Compliance Plan	
REMM WQ1	<p>A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International.</p> <p>On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the Airports (Environment Protection) Regulations 1997.</p> <p>The program would monitor all construction discharge locations.</p>
REMM WQ2	<p>Water treatment plants would be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.</p>
	<p>Groundwater elevation monitoring will be conducted to detect potential impacts to base flow in the vicinity of potentially sensitive creeks or groundwater dependent vegetation, other groundwater users, as well as ground settlement impacts on surrounding properties and infrastructure. Monitoring will be undertaken quarterly for the duration of the SBT Works.</p> <p>Refer to Section 10.4 of the SMWSA Soil and Water CEMP and Section 22.2 of the SMWSA Groundwater Management Plan for further details on monitoring locations, analytes and trigger values.</p>
	<p>Groundwater quality monitoring of alluvial and Bringelly Shale aquifers will be conducted at major infrastructure locations, down gradient from those locations and in the vicinity of groundwater dependent vegetation or watercourses, other groundwater users, as well as ground settlement impacts on surrounding properties and infrastructure. Monitoring will initially be undertaken quarterly and adjusted as appropriate.</p> <p>Refer to Section 10.4 of the SMWSA Soil and Water CEMP and Section 22.2 of the SMWSA Groundwater Management Plan for further details on monitoring locations, analytes and trigger values.</p>
	<p>Monthly surface water quality monitoring and reporting will be conducted in accordance with the SMWSA Soil and Water CEMP (Section 10.3) to monitor performance of the drainage system. This monitoring will occur once the surface water drainage system is in place and take place at basin outflows and during selected upstream and downstream conditions.</p> <p>Monitoring would be undertaken for wet weather events in excess of 20 mm (within a 24-hour period). Additional water quality monitoring may be undertaken during high-risk construction activities, such as installation or removal of temporary waterway crossings or in response to an incident, enquiry or complaint.</p> <p>Monitoring locations and water quality parameters are defined in the SMWSA Soil and Water CEMP (Section 10.3.1 and Section 10.3.3, respectively).</p>



Glossary

Term	Description
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CPBG	CPB Contractors Ghella Joint Venture
CSSI	Critical State Significant Infrastructure
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EPBC Act	Environmental Planning and Biodiversity Conservation Act 1999 (Commonwealth)
EMS	Environmental Management System
Plan	On Airport Environmental Compliance Plan
Project	Sydney Metro Western Sydney Airport
REMM	Revised Environmental Mitigation Measures
RID	Rail Integration Deed
SBT Works	Station Boxes and Tunnelling Works
SM	Sydney Metro
SMWSA	Sydney Metro Western Sydney Airport
TBM	Tunnel boring machine
WSI	Western Sydney International (Nancy Bird Walton) Airport
WSA	Western Sydney Airport Co Limited, the entity responsible for constructing and operating the WSI in accordance with the Airport Plan.



Part A Overview

1. Introduction

1.1. Purpose and application

This On-airport Water Treatment Plant Discharge Environmental Management Plan (the Plan) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project). This Plan describes how the CPB Contractors and Ghella Joint Venture (CPBG) will implement management of treated water discharges to the environment.

This Plan has been prepared to address the requirements of the:

- AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- SMWSA CEMPs
- EPBC Act Final Environmental Impact Assessment of on-airport proposed action (EPBC 2019/8541)
- Western Sydney Airport Plan (Airport Plan)
- Contract, including the SBT Design and Construction Deed and General and Particular Specifications
- Rail Integration Deed (RID).

1.2. Plan context

This Plan has been prepared by CPBG to implement the relevant obligations and environmental performance outcomes as detailed in the SM – WSA CEMPs, in particular the SMWSA SWCEMP and is pursuant to management of environmental risks associated with treated water discharge to the environment from on-airport construction water treatment plants. CPBG has developed an approved On-Airport Environmental Compliance Plan (Annexure C) which has addressed the relevant monitoring requirements from the suite of CEMPs developed as a requirement of the Airport Plan (2021) as is shown below in Figure 1.



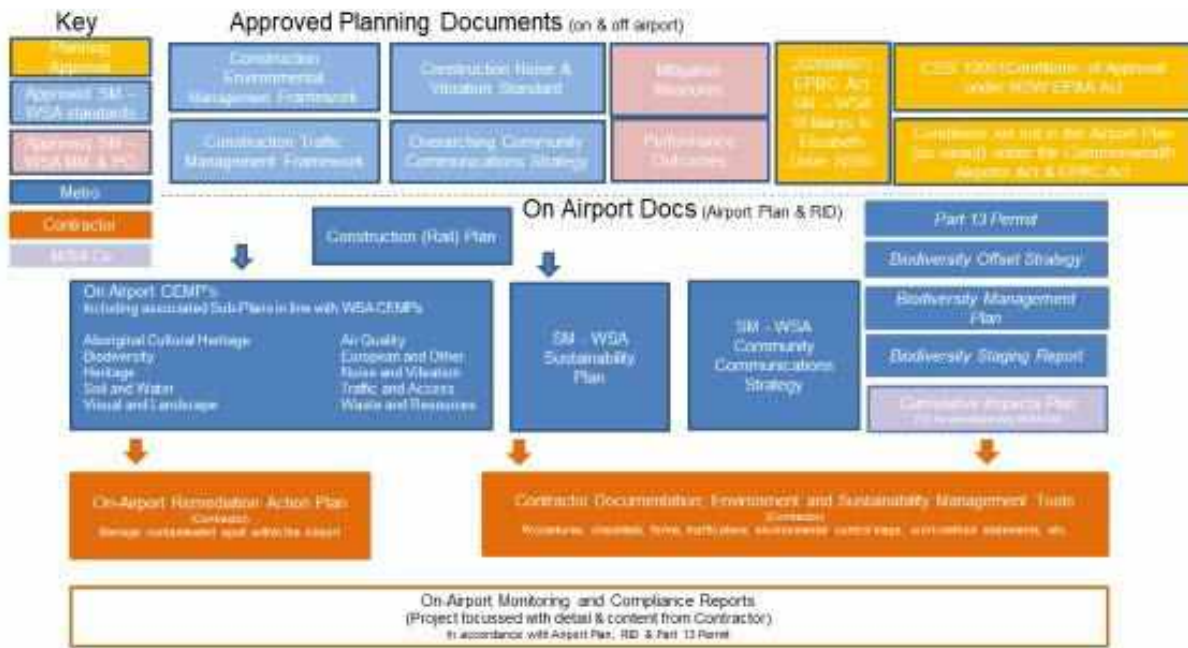


Figure 1: On-Airport Planning and Environmental Management System

1.3. Objectives and targets

The primary objective of this Plan is to implement the relevant obligations and environmental performance outcomes to support an application for authorisation made under Part 5 of the *Airports (Environment Protection) Regulations 1997* for the period for which the authorisation has effect. CPBG targets that discharges overall from the water treatment plants are not more environmentally damaging than would be the case if exact compliance with the accepted limits mentioned in Schedule 2 were achieved.

1.4. Plan Structure

Part	Description
Part A: Overview	<p>Section 1 – Purpose of the Plan and context</p> <p>Section 2 – Overview of the Project and the SBT Works</p> <p>Section 3 – Environmental Management System</p>
Part B: Implementation	<p>Element 1 – Training</p> <p>Element 2 – Monitoring</p> <p>Element 3 – Reporting</p> <p>Element 4 – Auditing, review and procurement</p> <p>Element 5 – Relevant SMWSA CEMP requirements (Annexure C).</p>
Annexures	<p>Annexure A – Water Treatment Plant Discharge Contingency Management Measures</p> <p>Annexure B – Construction water quality discharge criteria</p> <p>Annexure C – On-Airport Environmental Compliance Plan</p>



2. Project overview

2.1. SBT Works scope (on-airport)

2.1.1. Station Boxes and Tunnelling Works

An overview of the SBT Works at each on-airport worksite is provided in Table 1. Additional details on the construction scope of works are provided in the Construction and Site Management Plan (SMWSASBT-CPG-SWD-SW000-MB-PLN-000001)

Table 1: SBT Works overview

On-Airport Worksite	Indicative scope of works
Portal Dive Site and Airport Business Park Station	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support
Airport Terminal	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support
Spoil Site	<ul style="list-style-type: none"> • Access road • TBM spoil conveyor set up • Earthworks in accordance with SM Specifications

2.1.2. Construction methodology

The construction methodology for the SBT Works which will be interfacing Groundwater:

- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers.
- Two TBMs will be used to construct the mainline tunnel as follows:
 - Two double shield TBMs will be launched from the Airport Dive and tunnel south, from Airport Business Park (ABP) traverse the Airport Terminal (ATL) Station Box and Shaft, whereupon tunnelling will cease, and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at Airport Terminal Shaft. The TBMs will recommence tunnelling including traversing the Bringelly Shaft and be retrieved from the Aerotropolis Station Box (a distance of 5.5 km from the Airport Dive, with 2.5 km of the southern tunnels located off-airport within NSW).
 - Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to the Airport Dive site and retrieved from Aerotropolis, subject to relevant approvals.

Tunnelling, including station box, shaft and dive excavation, and associated support activities, will be undertaken 24 hours a day, seven days per week. Completed sections of the SBT Works, including established construction worksites, will be progressively handed over to Sydney Metro to enable follow-on contractors to commence works.



2.1.3. Water Treatment and Discharge

Groundwater inflows, process water, and incidental rainfall into station excavations will be pumped to construction water treatment plants located at Airport Business Park (ABP), and Airport Terminal Station (ATL). The water treatment plants have been designed to include a number of water treatment processes to improve water quality, including:

- Primary solids removal
- Flocculation / coagulation
- Media filtration
- Breakpoint chlorination and dechlorination
- Activated carbon filtration / adsorption
- pH correction

Following treatment, construction tunnel water will be conveyed via a joint pipeline (inclusive of ABP and ATL effluent) to Badgerys Creek using the creek tie-in adjacent to the low flow outlet of the existing WSA Detention Basin DB3.



Part B Implementation

Part B of this Plan explains how the Water Treatment Plant Discharge Construction Environment Management Plan (WDCEMP) will be implemented.



Element 1: Training

All staff, employees and subcontractors will actively drive continuous improvement in the environmental performance of the SBT Works.

Expectations	How will CPBG meet the Expectation?	Responsibility	Deliverables
1.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the SBT Works	<p>All personnel working on the SBT Works will undertake a site induction, which will include the following minimum requirements:</p> <ul style="list-style-type: none"> • Ecological values of the Airport Site and protection measures to be implemented to protect biodiversity during construction • Location of sensitive areas and designated no-go zones • Hold Points • Contamination • Cumulative impacts • Interactions with other contractors • Erosion and sediment controls and the airport drainage system • Minimum requirements before work can commence. 	<p>Human Resources Manager</p> <p>Environment Manager Environment Coordinators</p>	<p>Induction presentation</p> <p>Induction records</p> <p>Hold point register</p>
1.2. Toolbox talks are used to reinforce key management requirements and lessons learnt	<p>Toolbox talks will be undertaken to reinforce inductions, to advise of amended or new procedures, and or to communicate lessons learnt/incidents.</p>	<p>Environment Manager</p> <p>Site Supervisor Environment Coordinators</p>	<p>Toolbox records</p> <p>Toolbox topic schedule</p>



Element 2: Monitoring

All staff, employees and subcontractors will actively drive compliant environmental performance of the SBT Works

Ref	Requirement	Responsibility	Deliverables	Timing
Water Quality Monitoring				
1.1	Water quality monitoring will be undertaken at the construction water treatment plants, and in the receiving waterway (Badgerys Creek) supplementary to the project on-Airport SMWSA Soil and Water Construction Environmental Management Plan. All surface water quality monitoring will be undertaken by appropriately trained staff at combined effluent outfall from the water treatment plants, and at locations upstream, downstream and adjacent to the effluent outfall at the creek tie-in (discharge point) into Badgerys Creek.	Environmental Coordinator	Monitoring records and reports	Construction
1.2	Surface water quality monitoring will be undertaken on a weekly basis prior to the commencement of water treatment plant discharge to collect information on baseline conditions at the relevant monitoring locations as per Ref 1.1. Monitoring will be undertaken for pH, salinity, turbidity and nutrients.	Environmental Coordinator	Monitoring records and reports	Construction
1.3	Surface water quality monitoring will be undertaken during low and high-flow periods on a weekly basis during water treatment plant discharge for an initial month at the relevant monitoring locations and parameters as per Ref 1.1 and 1.2 to collect information on effects to water quality in response to discharge. Samples will subsequently be taken fortnightly. At 3 months the monitoring regime will be reviewed.	Environmental Coordinator	Monitoring records and reports	Construction
1.4	All surface water quality samples collected for laboratory analysis will be issued to a National Association of Testing Authorities (NATA) accredited testing laboratory for analysis within the required holding times, using the approved laboratory supplied sample containers and preservatives (where appropriate).	Environmental Coordinator	Monitoring records and reports	Construction
1.5	In the event that rain forecast is likely to exceed 25 mm in any 24-hour period, monitoring activities are to be re-assessed and if deemed necessary (i.e., in the event of prolonged rainfall and actual or potential for rising creek levels), monitoring events are to be rescheduled to ensure works can be undertaken during safe conditions.	Environmental Coordinator	Monitoring records and reports	Construction



Ref	Requirement	Responsibility	Deliverables	Timing
Vegetation Monitoring				
1.1	Develop a visual ecological monitoring program to be approved by the AEO and WSA	Environmental Coordinator	Monitoring records and reports	Construction
1.2	Set up photo monitoring points and sampling sites to assess vegetation condition on a monthly basis	Environmental Coordinator	Monitoring records and reports	Construction
1.3	Monthly visual inspection at to be determined locations upstream, at discharge and downstream of the discharge point.	Environmental Coordinator	Monitoring records and reports	Construction
Sediment Monitoring				
1.1	Sediment sampling prior to discharge at the discharge point and downstream at a minimum, for heavy metals Cr (Vi) and Zn within Badgerys Creek sediment.	Environmental Coordinator	Monitoring records and reports	Construction
1.2	Sediment sampling post discharge at the discharge point and downstream at a minimum, for heavy metals Cr (Vi) and Zn within Badgerys Creek sediment.	Environmental Coordinator	Monitoring records and reports	Construction

Element 3: Reporting

All staff, employees and subcontractors will actively drive compliant environmental performance of the SBT Works

Ref	Action	Scope	Responsibility	Timing
3.1	Sediment sampling plan	In order to assess potential impacts on heavy metals levels within the creek sediment, CPBG will prepare a sediment sampling plan for the AEO and WSA approval	Environment Manager	Prior to discharge
3.2	Visual Ecological Monitoring Plan	In order to assess potential impacts on riparian vegetation around the creek, CPBG will prepare a visual ecological monitoring plan for the AEO and WSA approval	Environment Manager	Prior to discharge
3.3	Annual Monitoring and Compliance Report	An annual surface water quality monitoring and compliance report will be compiled based on the surface water quality monitoring activities. The reports will be reviewed by the SM Environment Manager and provided to the AEO.	Environment Manager	Annually



Ref	Action	Scope	Responsibility	Timing
		<p>As a minimum, the annual surface water quality monitoring report for water treatment plant discharges will include the following:</p> <ul style="list-style-type: none"> • Date and location of the sampling event • Description of the weather and any potential influencing conditions • Factual reporting including lab results and field data • Interpretation of the results and comparison against the relevant criteria, including identification of any water quality exceedances and potential sources of the exceedance. 		
3.4	Monthly Monitoring and Compliance Report	<p>A monthly surface water quality monitoring and compliance report will be compiled based on the surface water quality monitoring activities. The reports will be reviewed by the SM Environment Manager and provided to the AEO. Any potential exceedances (as noted in the report) will be reported to the AEO and managed accordingly.</p> <p>As a minimum, the annual surface water quality monitoring report for water treatment plant discharges will include the following:</p> <ul style="list-style-type: none"> • Date and location of the sampling event • Description of the weather and any potential influencing conditions • Factual reporting including lab results and field data • Interpretation of the results and comparison against the relevant criteria, including identification of any water quality exceedances and potential sources of the exceedance. 	Environment Manager	Monthly
3.5	Baseline and Final Sediment analysis report	A report will be prepared for the baseline and final heavy metal assessment of sediment in Badgerys Creek	Environment Manager	As required
3.6	Monthly Vegetation Monitoring and Compliance Report	A monthly report presenting data from the monthly visual ecological assessment at determined sites along Badgerys Creek	Environment Manager	Monthly



Ref	Action	Scope	Responsibility	Timing
3.7	Complaints Reporting	All complaints and stakeholder interactions will be recorded.	Stakeholder and Community Engagement Manager	As required
3.8	Reporting of non-conformances and improvement opportunities	The management and reporting requirements of environmental non-conformances and improvement opportunities will be in accordance with Section 3.17 of the CEMF.	Environment Manager	As required
3.9	Annual report by holder of Authorisation	<p>The holder of an authorisation granted for a period longer than 1 year must give the airport environment officer who granted the authorisation (or that person's successor) a report for each year that the authorisation is in force, setting out:</p> <p>(a) details of the holder's performance in giving effect to the holder's plan under subregulation 5.07(3); and</p> <p>(b) details of progress (if any) made in reducing the generation of pollution or noise that is generated in excess of the approved limit, under the Schedules, for pollution or noise of that kind; and</p> <p>(c) any failure by the holder to comply with the terms and conditions (if any) of the authorisation.</p>	Environment Manager	Annually
3.10	Failure to comply with condition of authorisation	<p>(1) This regulation applies to an operator of an airport undertaking who has been granted an authorisation, and who:</p> <p>(a) contravenes a condition of the authorisation; or</p> <p>(b) knows of a contravention of a condition of the authorisation.</p> <p>(2) The operator must report the contravention to an airport environment officer:</p> <p>(a) before the end of 24 hours after the event; or</p> <p>(b) if the operator learns of the contravention after the event—before the end of 24 hours after the operator learns of the event.</p>	Environment Manager	As required





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Ref	Action	Scope	Responsibility	Timing
		<p>(3) For subsection 132(2) of the Act, the maximum number of penalty units for a contravention of subregulation (2) is 50 penalty units.</p> <p>Note: See also Part 15 of the Act, which provides for the grant of injunctions for certain contraventions of the Act.</p> <p>(4) It is a defence to a prosecution that the defendant knew that the contravention had already been reported, in writing, to an airport environment officer.</p> <p>Note: <i>A defendant bears an evidential burden in relation to whether he or she was knew that the contravention had already been reported, in writing, to an airport environment officer (see subsection 13.3(3) of the Criminal Code).</i></p>		



Element 4: Auditing, review, and improvement

We will continually improve our environmental systems and environmental performance by monitoring and reviewing their effectiveness

Expectations	How will CPBG meet the Expectation?	Responsibility	Deliverables
4.1 Review this EMP to ensure compliance	Review of this Plan will be undertaken in accordance with the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinator	Plan updates
4.2 Audits are undertaken to ensure compliance with the requirements of this Plan	Audits will be performed in line with the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002), and this Plan will be updated if required. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinators	Audit Reports Corrective Action Reports
4.3 All non-compliances are reported and actioned	Where a non-compliance is raised as part of an audit, incident or complaint investigation, the audit, incident or complaint report may be used to close out the non-compliance and it is not necessary to raise a separate non-compliance reporting process. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinators	Corrective Action Reports Complaint Reports Incident Reports Audit Reports
4.4 Proof of performance monitoring	A program of performance monitoring for the construction water treatment plants On-Airport to ensure they are operating under optimal conditions.	Environment Manager Environmental Coordinators	Proof of Performance Report



Annexure A Water Treatment Plant Discharge Contingency Management Measures

Potential Risk	Contingency Measures
Effluent water quality exceeds AEPR and/or authorisation discharge limits for one or more contaminants due to increased concentrations in groundwater	1. Beneficial reuse on-site for dust suppression
	2. Undertake mixing zone modelling to assess suitable site-specific discharge limits to surface water (in consultation with AEO for authorisation application variation).
	3. Mix with other water streams until discharge criteria are achieved.
	4. Dispose off-site to a licensed disposal facility.
Effluent water quality exceeds AEPR and/or authorisation discharge limits for one or more contaminants due to maintenance requirements at WTP	1. The WTP design incorporate two parallel treatment processing units. One unit may be taken offline for maintenance whilst the other remains functioning, minimising risk of discharge being impacted by maintenance requirements.
	2. Mix with other water streams until discharge criteria are achieved.
	3. Dispose off-site to a licensed disposal facility.
	4. Tanker water to nearest appropriate WTP for secondary treatment.
Turbidity of treated effluent exceeds AEPR discharge limits	1. Recirculate treated effluent through the WTP until required discharge limits are achieved.
	2. Beneficial reuse on-site for dust suppression
	3. Tanker to nearest alternative site for secondary treatment
Salinity of treated effluent exceeds authorisation discharge limits	1. Beneficial reuse on-site for dust suppression
	2. Mix with other non-potable water streams until discharge criteria are achieved.
	3. Dispose off-site to a licensed disposal facility.
	4. Dispose off-site to trade waste under trade waste agreement
	5. Tanker to nearest alternative site for secondary treatment
Natural creek flow reduces below the median flow rate	1. Coordinate the timing of discharges with Sediment Basin 3 and FS01 sediment basin discharge
	2. Dispose off-site to trade waste under trade waste agreement
	3. Dispose off-site to a licensed disposal facility.



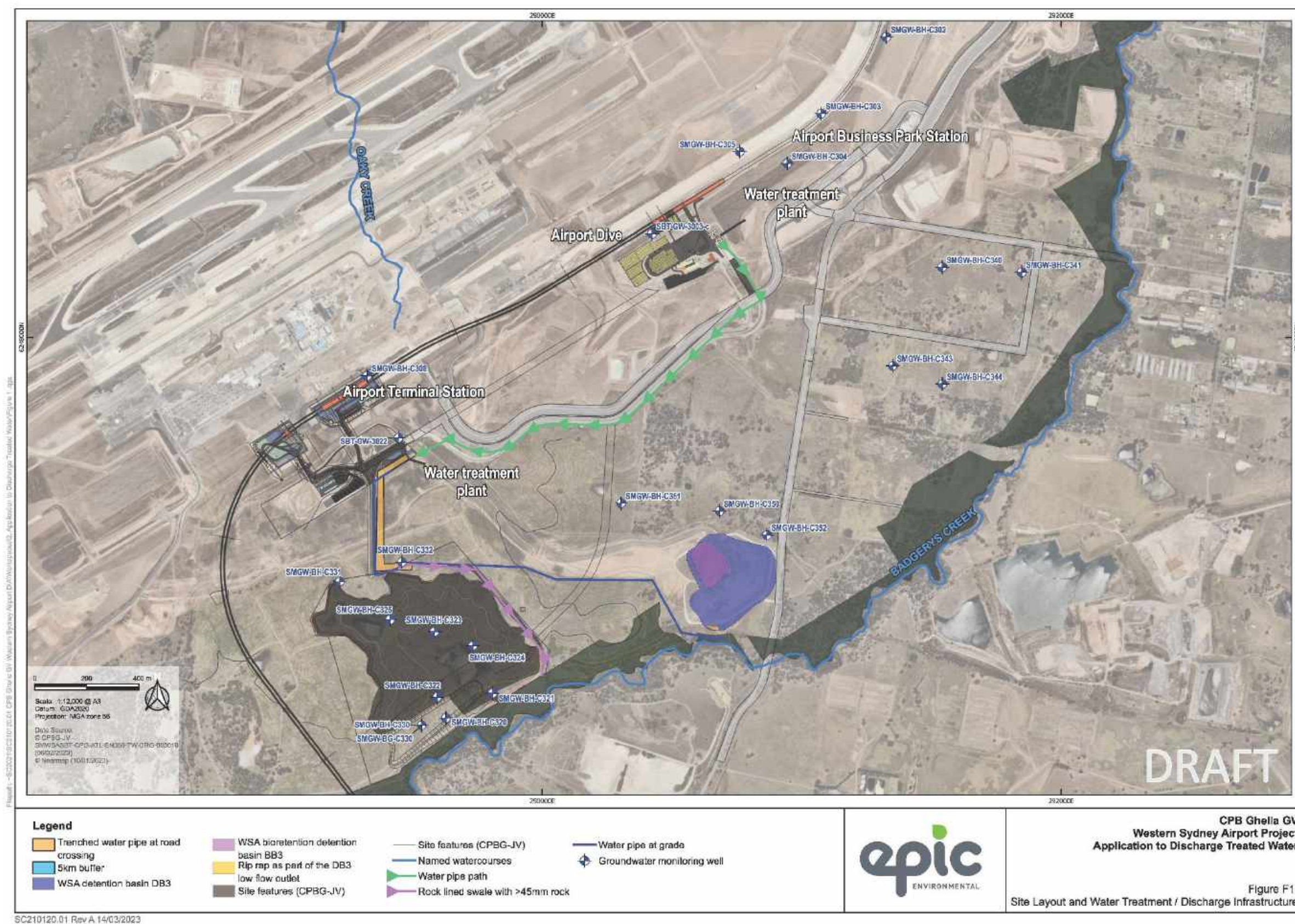


Figure 2: On-Airport Site Layout, Water Treatment Plants, and Discharge Infrastructure

Annexure B Construction water quality discharge criteria

Parameter	Criteria	Sampling method	Analytical method
Receiving water within the Airport Site (AEPR)			
pH	6.5-9.0	Grab Sample	Field analysis and confirmed as required with laboratory assessment
Total suspended solids (TSS)	Not more than 10% from the existing level in the receiver water	Grab sample	Field analysis and confirmed as required with laboratory assessment
Total dissolved solids (TDS)	TBD	Grab sample	Field analysis and confirmed as required with laboratory assessment
DO (%sat)	80% of level in the ambient receiving water or> 6mg/L	Grab Sample (Probe)	Field analysis and confirmed as required with laboratory assessment
DO (mg/L)		Grab Sample (probe)	Field analysis and confirmed as required with laboratory assessment
Receiving water discharged off the Airport Site (AEPR, including <i>authorisation</i>) to include and meet exceedance criteria of salinity, N and P			
Oil and Grease	No visible	Visual assessment for oil sheen	Field analysis and confirmed as required with laboratory assessment
pH	6.5-9.0	Grab Sample	Field analysis and confirmed as required with laboratory assessment
Salinity (mg/L)	8200	Grab sample	Field analysis and confirmed as required with laboratory assessment
Turbidity (total suspended solids - TSS)	<10% change from the seasonal mean TSS	Grab Sample	Field analysis and confirmed as required with laboratory assessment
Phosphorus (µg/L)	100	Grab Sample	Laboratory assessment
Nitrogen (µg/L)	2400	Grab Sample	Laboratory assessment
DO (%sat)	>80%	Grab Sample (Probe)	Field analysis and confirmed as required with laboratory assessment
DO (mg/L)	>6	Grab Sample (probe)	Field analysis and confirmed as required with laboratory assessment



Annexure C On-Airport Environmental Compliance Plan



On-Airport Environmental Compliance Plan

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-SWD-SW000-EN-PLN-202026
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Revision	1

Document approval

Rev	Date	Prepared by	Reviewed by	Remarks	Signature
A	22/06/2022				
0	10/08/2022				
1	16/09/2022			Revised in response to SM comments.	



Table of contents

Compliance	2
Glossary	5
Part A Overview	1
1. Introduction	1
1.1. Purpose and application	1
1.2. Plan context	1
1.3. Objectives and targets	2
1.4. Plan Structure	2
2. Project overview	3
2.1. Project description	3
2.2. Project Staging	5
2.2.1. Overview	5
2.3. SBT Works scope (on-airport)	5
2.3.1. Station Boxes and Tunnelling Works	5
2.3.2. Construction methodology	5
Part B Implementation	1
Element 1: Training	1
Element 2: Monitoring	2
Element 3: Reporting	8
Element 4: Auditing, review, and improvement	12
Element 5: SMWSA CEMP Requirements	13

Table of tables

Table 1: SBT Works overview	5
-----------------------------------	---

Table of figures

Figure 1: Project Overview	4
----------------------------------	---

Annexures

Annexure A Site Condition Monitoring Protocol	1
Annexure B Sydney Metro WSA Out of Hours Works Permit Form	1
Annexure C Construction water quality discharge criteria	1



Compliance

No.	Requirement	Reference
Airport Plan		
37.2	<p>In carrying out a Preparatory Activity for the Rail Development, the Rail Authority must:</p> <p>(a) implement any plan approved in accordance with subcondition (1), except to the extent that the plan is inconsistent with any subsequently approved Rail CEMP or the approved Construction (Rail) Plan; and</p> <p>(b) not act inconsistently with any approved Rail CEMP or the approved Construction (Rail) Plan.</p> <p>Note: Preparatory Activities can generally commence before all Rail CEMPs are approved. If a Rail CEMP has been approved, however, Preparatory Activities must not be carried out inconsistently with the approved Rail CEMP.</p>	This Plan details how CPBG will implement the requirements of the Sydney Metro Western Sydney Airport (SMWSA) Construction Environmental Management Plans (CEMPs) as relevant to the scope of the SBT Works.
39.1	<p>The Rail Authority must not:</p> <p>a) commence Rail Construction Works until each and all of the CEMPs specified in paragraph (2) have been prepared and approved in accordance with this condition; or</p> <p>(b) carry out any Rail Development inconsistently with any of the approved Rail CEMPs.</p>	Sydney Metro have developed and obtained approval for the SMWSA CEMPs. This Plan details how CPBG will implement requirements of the SMWSA CEMPs as relevant to the scope of the SBT Works.
40.1	<p>The Rail Authority must not:</p> <p>(a) commence Rail Construction Works until a Community Communications Strategy has been prepared and approved in accordance with this condition; or</p> <p>(b) carry out any Rail Development inconsistently with the approved Community Communications Strategy.</p>	Sydney Metro has developed and obtained approval of the Overarching Community Communications Strategy. The requirements, as relevant to the SBT Works, are detailed in the Community Communication Strategy (SMWSASBT-CPG-1NL-NL000-CY-PLN-000002) which will be implemented by CPBG.
41.1	<p>The Rail Authority must not:</p> <p>(a) commence Rail Construction Works until a Sustainability Plan has been prepared and approved in accordance with this condition; or</p> <p>(b) carry out any Rail Development inconsistently with the Approved Sustainability Plan.</p>	Sydney Metro has developed and obtained approval of the Sustainability Plan. The requirements, as relevant to the scope of the SBT Works, are detailed in the Sustainability Management Plan (SMWSASBT-CPG-1NL-NL000-EV-PLN-000001) which will be implemented by CPBG.
42.4	Each of the Rail Authority and the ALC must not act inconsistently with the approved Cumulative Impacts Plan.	Sydney Metro has developed and obtained approval of the Cumulative Impacts Plan (March 2022). CPBG will implement the Cumulative Impacts Plan as relevant to the scope of the SBT Works.
43.1	The Rail Authority must not commence Rail Development until the Staging Report has been submitted in accordance with subconditions (3) and (4), and the Rail Biodiversity Offset Strategy has been approved in accordance with subconditions (5), (6) and (7).	Sydney Metro has submitted the Staging Report and obtained approval of the Rail Biodiversity Offset Strategy. CPBG will implement relevant requirements of the documents as detailed in Part B of this Plan.



No.	Requirement	Reference
43.2	Clearing of plant community types, threatened ecological communities, or threatened species must not exceed the amounts specified in the Biodiversity Development Assessment Report at Appendix C of the EIA.	Vegetation clearing restrictions are detailed in Part B of this Plan (Element 5, control B_02).
43.8	The Rail Authority must implement the approved Rail Biodiversity Offset Strategy.	Sydney Metro is responsible for the requirements of this condition.
43.10	The Completion Report must set out: (a) Shapefiles of the Rail Construction Impact Zone shown in the EIA and Biodiversity Development Assessment Report at Appendix C of the EIA with a comparison to the refined construction footprint; and (b) Final quantification of biodiversity offset requirements as determined in accordance with subcondition (7)(a)(ii). (c) details of how the biodiversity offset requirements, determined in accordance with subcondition (7)(a)(iv), have been satisfied; and (d) evidence of the legal security mechanism used to secure an offset.	Refer to Part B (Element 3) for details on completion reporting. It is noted that Sydney Metro is responsible for parts (b), (c) and (d) of this condition.
45.3	The Rail Authority must take reasonable steps to ensure that: (a) each person involved in carrying out a development which is part of the Rail Development: (i) is informed of the conditions that are relevant to the carrying out of the Rail Development; and (ii) in carrying out the Rail Development, complies with those conditions as if they applied to the person in the same way as they apply to the Rail Authority; and (b) each person involved in operating a development described in section 3.10 of Part 3 of the Airport Plan: (i) is informed of the conditions that are relevant to the operation of the development; and (ii) in operating the development, complies with those conditions as if they applied to the person in the same way as they apply to the Rail Authority.	CPBG will implement the requirements of this condition through: <ul style="list-style-type: none"> • Environmental training and competency (Section 7.8 of the CEMP, SMWSASBT-CPG-1NL-EV-PLN-000002) • Environmental inspections (Section 7.4.2 of the CEMP, SMWSASBT-CPG-1NL-EV-PLN-000002) • Environmental monitoring (Section 5.5 of the CEMP, SMWSASBT-CPG-1NL-EV-PLN-000002) It is noted that Sydney Metro is responsible for part (b) of this condition.
46	Each Site Occupier, the Rail Authority and each Plan Owner must maintain accurate records which demonstrate its compliance with the conditions, including measures taken to implement the Approved Plans, and must make the records available upon request to the Infrastructure Department.	Monitoring records (as detailed in Element 3 of this Plan) will be made available upon request to the Department of Infrastructure, Transport, Regional Development and Communications (DITRDC).
47.4	Unless otherwise agreed in writing by an Approver, the Rail Authority must prepare a report addressing its compliance with each condition set out in section 3.11.6, including implementation of any Approved Plan, in respect of: (a) the 12-month period commencing with the commencement of Rail Construction Works; and (b) each subsequent 12-month period until the end of the Rail Construction Period; and (c) any period between the commencement of Rail Construction Works and the end of the Rail Construction Period that is not covered by paragraph (a) or (b).	Sydney Metro will prepare the annual compliance report. As detailed in Part B of this Plan (Element 3), CPBG will provide all relevant documentation.



No.	Requirement	Reference
48.4	The Rail Authority must ensure that an independent audit of its compliance with the conditions set out in section 3.11.6 (except condition 44) is conducted in respect of the 12-month period commencing with the commencement of Rail Construction Works.	Sydney Metro will engage the Independent Auditor. CPBG will facilitate and assist with any audit in accordance with Section 7.13.1 of the CEMP, SMWSASBT-CPG-1NL-EV-PLN-000002.



Glossary

Term	Description
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CPBG	CPB Contractors Ghella Joint Venture
CSSI	Critical State Significant Infrastructure
CTMF	Construction Traffic Management Framework
CTMP	Construction Traffic Management Plans
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications (Commonwealth)
DNVIS	Detailed Noise and Vibration Impact Statements
DPE	NSW Department of Planning and Environment
ECM	Environmental Control Map
ECZ	Environmental Conservation Zone
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EPBC Act	Environmental Planning and Biodiversity Conservation Act 1999 (Commonwealth)
EPL	Environment Protection Licence
EMS	Environmental Management System
EWMS	Environmental Work Method Statement
OOHW	Out of Hours Works
Plan	On Airport Environmental Compliance Plan (this document)
Project	Sydney Metro Western Sydney Airport
REMM	Revised Environmental Mitigation Measures
RID	Rail Integration Deed
SBT Works	Station Boxes and Tunnelling Works
SM	Sydney Metro
SMWSA	Sydney Metro Western Sydney Airport
TBM	Tunnel boring machine
TTLG	Traffic and Transport Liaison Group
WSI	Western Sydney International (Nancy Bird Walton) Airport



Term	Description
WSA	Western Sydney Airport Co Limited, the entity responsible for constructing and operating the WSI in accordance with the Airport Plan.



Part A Overview

1. Introduction

1.1. Purpose and application

This On-airport Environmental Compliance Plan (Plan) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project). This Plan describes how the CPB Contractors Ghella Joint Venture (CPBG) will implement the requirements of the Sydney Metro Western Sydney Airport (SMWSA) Construction Environmental Management Plans (CEMP).

This Plan has been prepared to address the requirements of the:

- AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- SMWSA CEMPs
- Environmental Impact Statement (EIS) and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs) (where relevant)
- Western Sydney Airport Plan (Airport Plan)
- Contract, including the SBT Design and Construction Deed and General and Particular Specifications
- Rail Integration Deed (RID).

1.2. Plan context

The Airport Plan sets out the vision for the development and operation of Western Sydney International (Nancy Bird Walton) Airport (WSI) and provides authorisation for Stage 1 of the airport. The Airport Plan for the WSI was determined in December 2016, following preparation and exhibition of an EIS, and incorporates the conditions specified by the Commonwealth Environment Minister. The delivery of the Project on the WSI site (the SMWSA Railway Development) has been authorised through a variation of the Airport Plan by the Commonwealth Infrastructure Minister, taking into account advice from the Commonwealth Environment Minister.

In September 2019, the Commonwealth Infrastructure Minister referred the on-airport components of the Project to the Commonwealth Environment Minister. In December 2019, the delegate of the Commonwealth Environment Minister decided that advice is required under section 160 of the Environmental Planning and Biodiversity Conservation Act (EPBC Act) as the proposed action is likely to have a significant impact on the environment and will require further assessment (EPBC 2019/8541).

An EPBC Act Final Environmental Impact Assessment of on-airport proposed action (EPBC 2019/8541) was approved by the Commonwealth Department of Agriculture, Water and the Environment (DAWE) and formed part of the conditions of the Airport Plan Variation which was lodged with the Infrastructure Department and approved by the Commonwealth Environment Minister.

After considering the final environmental assessment and variation to the Airport Plan, the Commonwealth Environment Minister provided advice to the Commonwealth Infrastructure Minister. Western Sydney Airport Co. Limited (WSA) submitted a formal application to the Commonwealth Infrastructure Minister to vary the Airport Plan who approved the variation to the Airport Plan in September 2021.

Sydney Metro (SM) subsequently prepared and obtained necessary approvals for the following suite of plans to satisfy the relevant Conditions of the Airport Plan:



- SMWSA European and Other Heritage CEMP (Rev 5)
- SMWSA Aboriginal Cultural Heritage CEMP (Rev 5)
- SMWSA Air Quality CEMP (Rev 5)
- SMWSA Biodiversity CEMP (Rev 5)
- SMWSA Noise and Vibration CEMP (Rev 5)
- SMWSA Soil and Water CEMP (Rev 5)
- SMWSA Traffic and Access CEMP (Rev 5)
- SMWSA Visual and Landscape CEMP (Rev 5)
- SMWSA Waste and Resources CEMP (Rev 5)
- SMWSA Construction (Rail) Plan (Rev 4)
- SMWSA Sustainability Plan (January 2022)
- SMWSA Overarching Community Communications Strategy (Rev 2.2).

This Plan has been prepared by CPBG to implement the relevant obligations and environmental performance outcomes as detailed in the above SMWSA plans.

1.3. Objectives and targets

The primary objective of this Plan is to implement the relevant obligations and environmental performance outcomes as detailed in the SMWSA CEMPs. Aspects-specific objectives and targets are detailed in the relevant SMWSA CEMPs.

1.4. Plan Structure

Part	Description
Part A: Overview	<p>Section 1 – Purpose of the Plan and context</p> <p>Section 2 – Overview of the Project and the SBT Works</p> <p>Section 3 – Environmental Management System</p>
Part B: Implementation	<p>Element 1 – Training</p> <p>Element 2 – Monitoring</p> <p>Element 3 – Reporting</p> <p>Element 4 – Auditing, review and procurement</p> <p>Element 5 – SMWSA CEMP requirements and how each will be addressed by CPBG.</p>



2. Project overview

2.1. Project description

The Sydney Metro Western Sydney Airport will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new WSI and the growing region.

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a 23km new metro rail line that extends from the existing Sydney Trains suburban T1 Western Line (at St Marys) in the north and the Aerotropolis (at Bringelly) in the south. The alignment includes a combination of tunnels and civil structures, including viaduct, bridges, surface and open-cut troughs between the two tunnel sections (Figure 1).





Figure 1: Project Overview



2.2. Project Staging

2.2.1. Overview

The Project will be delivered through the following stages:

- Advanced and Enabling Works – Site investigations, modification of the existing transport network, power and water supply for construction sites, utility and stormwater diversions and some demolition works
- SBT Works (the on-airport component is the subject of this Plan) – Site establishment, site access and parking, compounds, material storage, piling and excavation, retaining structures, construction utilities, TBM support infrastructure, tunnelling and cross passage installation
- Surface and Civil Alignment Works – Construction of bridges and viaducts to cross floodplains, watercourses and existing and proposed permanent infrastructure
- Stations, Systems, Trains, Operations and Maintenance – Station design and fit-out, testing and commissioning, and operation of the Western Sydney Airport metro service
- Finalisation Auxiliary Works.

2.3. SBT Works scope (on-airport)

2.3.1. Station Boxes and Tunnelling Works

An overview of the SBT Works at each on-airport worksite is provided in Table 1. Additional details on the construction scope of works are provided in the Construction and Site Management Plan (SMWSASBT-CPG-SWD-SW000-MB-PLN-000001)

Table 1: SBT Works overview

On-Airport Worksite	Indicative scope of works
Portal Dive Site and Airport Business Park Station	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support
Airport Terminal	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support
Spoil Site	<ul style="list-style-type: none"> • Access road • TBM spoil conveyor set up • Earthworks in accordance with SM Specifications

2.3.2. Construction methodology

The construction methodology for the SBT Works entails:

- Utility works including removal, diversion, protection and connection to SBT worksites
- Local area works including provision of site accesses and some road upgrades
- Site establishment works including:
 - Fencing



- Installation of environmental mitigation including erosion and sediment controls, noise barriers, and acoustic enclosures
- Clearing and grubbing of existing vegetation
- Site levelling and drainage works
- Establishment of internal access roads, hardstand areas and onsite parking
- Erection of demountable buildings including offices and amenities
- Other ancillary facility works including the erection of sheds, establishment of materials laydown and stockpiling areas and Tunnel Boring Machines (TBMs) support works including spoil conveyors.
- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers.
- Two TBMs will be used to construct the mainline tunnel as follows:
 - Two double shield TBMs will be launched from the Airport Dive and tunnel south, traverse the Airport Terminal Station Box and Shaft, whereupon tunnelling will cease, and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at Airport Terminal Shaft. The TBMs will recommence tunnelling including traversing the Bringelly Shaft and be retrieved from the Aerotropolis Station Box (a distance of 5.5 km from the Airport Dive, with 2.5 km of the southern tunnels located off-airport within NSW).
 - Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to the Airport Dive site and retrieved from Aerotropolis, subject to relevant approvals.

The SBT Works do not include any surface works between the northern and southern tunnel sections, which are to be undertaken by another contractor as part of the Surface and Civil Alignment Works stage.

Tunnelling, including station box, shaft and dive excavation, and associated support activities, will be undertaken 24 hours a day, seven days per week. Utility and local area works which cannot be completed during standard daytime hours due to Road Occupancy Licence (ROL) requirements or utility authority requirements will also be undertaken outside of standard hours.

Completed sections of the SBT Works, including established construction worksites, will be progressively handed over to Sydney Metro to enable follow-on contractors to commence works.

Changes to the SBT Works scope may be required to facilitate constructability, amenity and staging. This may include but is not limited to refinement of site layouts based on detailed construction planning and safety assessment. For example:

- Relocation of internal access roads to allow for refinements in heavy vehicle/light vehicle movements
- Separation of people and plant
- Alteration to car parking/container and laydown areas to allow for safe working distances
- Movement of portable site offices, workshops and containers for construction staging.



Part B Implementation

Part B of this Plan explains how the requirements of the SMWSA CEMPs will be implemented. All relevant mitigation measures from the SMWSA CEMPs are addressed in this section of the Plan.

Part B contains the following:

- **Environmental Elements and Expectations:** A description of what is required of the SBT Works in order to implement the objectives of CPBG's Environment and Sustainability Policy:
 - **Element** – Key aspects for managing this function in delivering the on-airport SBT Works
 - **Intent** – A one-line statement describing the overall purpose of the Element
 - **Expectation** – The outcomes achieved as part of each Element.
- **Reference:** A unique number and/or letters has been provided against each requirement to enable cross-referencing within the CPB EMS.
- **Requirements:** The requirements of the SMWSA CEMPs that are of relevance to the SBT Works
- **How will CPBG meet the Requirement:** The specific actions to be performed by CPBG to demonstrate compliance with the SMWSA CEMP requirement
- **Responsibility:** Positions with responsibility for the actions (key contributor identified in bold font)
- **Deliverables:** Evidence to be produced to demonstrate compliance with the requirement
- **Timing:** Timing of deliverables.



Element 1: Training

All staff, employees and subcontractors will actively drive continuous improvement in the environmental performance of the SBT Works.

Expectations	How will CPBG meet the Expectation?	Responsibility	Deliverables
1.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the SBT Works	<p>All personnel working on the SBT Works will undertake a site induction, which will include the following minimum requirements:</p> <ul style="list-style-type: none"> • Identification of Aboriginal artefacts and management of Aboriginal heritage values • Heritage awareness and unexpected finds • Air quality control practices • Ecological values of the Airport Site and protection measures to be implemented to protect biodiversity during construction • Location of sensitive areas and designated no-go zones • Unexpected or anticipated threatened species finds and the action taken to resolve the situation • Weed and disease matters and hygiene • Waste minimisation and reuse management measures, including the requirements of the waste management hierarchy • Energy consumption awareness • Hold Points • Contamination • Cumulative impacts • Interactions with other contractors • Erosion and sediment controls and the airport drainage system • Minimum requirements before work can commence. 	<p>Human Resources Manager</p> <p>Environment Manager</p> <p>Environment Coordinators</p>	<p>Induction presentation</p> <p>Induction records</p> <p>Hold point register</p>
1.2. Toolbox talks are used to reinforce key management requirements and lessons learnt	<p>Toolbox talks will be undertaken to reinforce inductions, to advise of amended or new procedures, and or to communicate lessons learnt/incidents.</p>	<p>Environment Manager</p> <p>Site Supervisor</p> <p>Environment Coordinators</p>	<p>Toolbox records</p> <p>Toolbox topic schedule</p>



Element 2: Monitoring

All staff, employees and subcontractors will actively drive compliant environmental performance of the SBT Works

Ref	Requirement	Responsibility	Deliverables	Timing
General				
2.1	Site Supervisor to undertake daily inspections of worksite to ensure environmental controls are adequate and appropriate. This is to include an inspection of applicable environmental aspects, management measures and controls. Works are not to commence unless inspections are found to be satisfactory.	Site Supervisor	Site Diary entries	Construction
2.2	<p>Environmental inspections of environmental performance and controls will be undertaken of all SBT worksites. Inspections will include:</p> <ul style="list-style-type: none"> General environmental inspections – Weekly inspection of all work sites including monitoring of no-go areas Pre shut-down inspection – Assessment of environmental controls prior to shut-down of a site for an extended period (i.e. more than two days) Pre- and post-rainfall inspection – Inspection of environmental controls prior to and following a rainfall event exceeding 10 mm in any 24-hour period High-risk Impact – Inspections during high-risk activities such as vegetation clearing, dam draining, highly noise intensive works, or activities with a high potential to generate a high volume or sensitive waste type or utilise a high volume / quantity of resources. Pre-clearance inspection – Inspection of all vegetation prior to clearing to identify all species, fauna habitat, numbers of habitat trees, and threatened ecological communities. <p>The environmental inspection register will be made available to the Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) on request.</p>	Environmental Coordinators	Environmental Inspection Checklist	Construction
Air Quality				
2.3	Real time monitoring will be conducted at suitable locations for PM10, PM2.5, dust deposition and dust flux. Monitoring locations will be based on work fronts and may involve hand held	Environmental Coordinators	Environmental monitoring records	Pre-construction Construction



Ref	Requirement	Responsibility	Deliverables	Timing
	monitors to assess package influence on project wide cumulative air quality impacts. Phone and /or email alerts will be delivered to the relevant personnel.			
2.4	Weather data will be obtained at the premises, including rainfall measured and recorded in millimetres per 24-hour period at the same time each day from the time. Monitoring records will be maintained in addition to records of any management measures implemented as a result of adverse, windy weather conditions.	Environmental Coordinators	Environmental monitoring records	Daily
2.5	Daily visual inspections will be undertaken, including during high wind events. Records will be kept on a daily basis.	Site Supervisor	Daily site diary	Daily
Biodiversity				
2.6	Monitoring of Weeds <ul style="list-style-type: none"> Priority weed mapping will occur prior to clearing works. Any additional instances of weeds or pathogens that are identified are to be provided to SM, with co-ordinates and species identification. The project area will be monitored for weed invasion during weekly site inspections, and any other inspections or audits undertaken as part of CEMP requirements. The presence of weed infestations would be reported as part of the inspection process, and include actions to be undertaken to manage these infestations. 	CPBG Ecologist	Weed mapping	Pre-construction Construction
2.7	Green and Golden Bell Frog Surveys Preclearance surveys completed by Leneco Pty Ltd in December 2021 (Leneco Ecological Surveys) did not identify threatened flora individuals, populations or threatened fauna within the Spoil Site. As such, no further surveys for Green and Golden Bell Frogs are warranted.	N/A	N/A	N/A
2.8	Bushfire Management Implement the requirements of the Site Condition Monitoring Protocol (Annexure A).	Project Manager Environmental Coordinator Superintendent	Monitoring records	Construction
Noise				



Ref	Requirement	Responsibility	Deliverables	Timing
2.9	Noise monitoring in accordance with AS1055 will be conducted at the nearest sensitive receptor locations to determine the effectiveness of mitigation measures against predicted impacts. During construction, monitoring of new activities or new location will be completed within the first two shifts to confirm noise levels are within predicted levels and mitigation measures are appropriate. Further monitoring will be offered in response to a complaint.	Environmental Coordinator	Monitoring records	Construction
2.10	An inspection log will be prepared following each monitoring event and will made available to DITRDC upon request.	Environmental Coordinator	Monitoring records	Construction
2.11	Where complaints are received, additional noise monitoring may be undertaken at sensitive receptors to determine if the actual construction noise generated exceeds the predicted 'worst case' construction noise levels.	Environmental Coordinator	Monitoring records	Construction
2.12	Noise monitoring may be carried out for the purpose of refining construction methods or techniques to minimise noise.	Environmental Coordinator	Monitoring records	Construction
2.13	Ongoing spot checks of noise intensive plant and equipment will be undertaken throughout construction to ensure compliance with manufactures specifications.	Environmental Coordinator	Monitoring records	Construction
2.14	The frequency of site inspections will be increased when activities with a high potential to result in elevated noise emissions are undertaken near residential receptors.	Environmental Coordinator	Environmental inspection checklist	Construction
2.15	Where actual noise levels are found to exceed the predicted worst-case levels, the source of excessive noise generations will be identified, and any additional feasible and reasonable measures available will be implemented to either reduce noise emissions or reduce the impacts on receptors.	Environmental Coordinator	Monitoring records	Construction
2.16	Where it has been identified that specific construction activities are likely to exceed the relevant noise or vibration goals, noise or vibration monitoring may be conducted at the affected receiver(s) or a nominated representative location (typically the nearest receiver where more than one receiver have been identified). Monitoring can be in the form of either unattended logging or operator attended surveys. The purpose of monitoring is to inform the relevant personnel when the noise or vibration goal has been exceeded so that additional management measures may be implemented.	Environmental Coordinator	Monitoring records	Construction



Ref	Requirement	Responsibility	Deliverables	Timing
Vibration				
2.17	For the protection of buildings, monitoring will be carried out at the commencement of vibratory compaction work within 50 metres of buildings to ensure that safe vibration levels specified in the SMWSA Noise and Vibration CEMP (Section 6) are not exceeded and to confirm safe working distances.	Environmental Coordinator	Monitoring records	Construction
2.18	When vibration intensive activities such as tunnel boring machines, roadheaders or rockbreakers are required, vibration monitoring will be carried out within the established buffer zones, or where there is a risk that levels may exceed the relevant structural damage goals.	Environmental Coordinator	Monitoring records	Construction
2.19	Vibration monitoring may be carried out in response to complaints, exceedances, or for the purpose of refining construction methods or techniques to minimise vibrations.	Environmental Coordinator	Monitoring records	Construction
2.20	Vibration monitoring will continue throughout construction, where appropriate, at nominated sensitive receptor locations to determine the effectiveness of mitigation strategies.	Environmental Coordinator	Monitoring records	Construction
Soil and Water				
2.21	Groundwater elevation monitoring will be conducted to detect potential impacts to base flow in the vicinity of potentially sensitive creeks or groundwater dependent vegetation, other groundwater users, as well as ground settlement impacts on surrounding properties and infrastructure. Monitoring will be undertaken quarterly for the duration of the SBT Works. Refer to Section 10.4 of the SMWSA Soil and Water CEMP and Section 22.2 of the SMWSA Groundwater Management Plan for further details on monitoring locations, analytes and trigger values.	Environmental Coordinator	Monitoring records and reports	Construction
2.22	Groundwater quality monitoring of alluvial and Bringelly Shale aquifers will be conducted at major infrastructure locations, down gradient from those locations and in the vicinity of groundwater dependent vegetation or watercourses, other groundwater users, as well as ground settlement impacts on surrounding properties and infrastructure. Monitoring will initially be undertaken quarterly and adjusted as appropriate.	Environmental Coordinator	Monitoring records and reports	Construction



Ref	Requirement	Responsibility	Deliverables	Timing
	Refer to Section 10.4 of the SMWSA Soil and Water CEMP and Section 22.2 of the SMWSA Groundwater Management Plan for further details on monitoring locations, analytes and trigger values.			
2.23	<p>Monthly surface water quality monitoring and reporting will be conducted in accordance with the SMWSA Soil and Water CEMP (Section 10.3) to monitor performance of the drainage system. This monitoring will occur once the surface water drainage system is in place and take place at basin outflows and during selected upstream and downstream conditions.</p> <p>Monitoring would be undertaken for wet weather events in excess of 20 mm (within a 24-hour period). Additional water quality monitoring may be undertaken during high-risk construction activities, such as installation or removal of temporary waterway crossings or in response to an incident, enquiry or complaint.</p> <p>Monitoring locations and water quality parameters are defined in the SMWSA Soil and Water CEMP (Section 10.3.1 and Section 10.3.3, respectively).</p>	Environmental Coordinator	Monitoring records and reports	Construction
Traffic and Access				
2.24	<p>Undertake general construction site traffic inspections in accordance with the Construction Traffic Management Framework (CTMF) and Section 10.2 of the SMWSA Traffic and Access CEMP. Inspections include:</p> <ul style="list-style-type: none"> • Pre-start and pre-close-down inspections of short-term traffic control • Weekly inspections of long-term traffic control. • Night inspections of long-term traffic control. 	Traffic Manager	Inspection reports	Construction
2.25	<p>Monitoring the effectiveness of traffic control measures on site by way of observation of site traffic speed and adherence to designated site traffic routes (the latter may require off-site surveillance). If vehicles to and from site are not adhering to traffic and access requirements, consideration should be given to improvement of mitigation measures and controls, including upgrade of signage, clearer signage, training etc.</p> <p>Where a non-conformance is detected, the non-conformance process described in Section 3.17 of the SM CEMF will be implemented.</p>	Traffic Manager	Monitoring records	Construction



Ref	Requirement	Responsibility	Deliverables	Timing
Waste and Resources				
2.26	All waste material generated on the Airport Site and resources used are to be tracked and classified to meet the requirements of the sustainability targets outlined in the SM Sustainability Plan. Waste tracking is to include volumes / quantities disposed, reused and recycled.	Environment Manager	Material tracking register	Construction
2.27	<p>Waste monitoring must take place under the direction of an appropriately qualified person:</p> <ul style="list-style-type: none"> The results of the monitoring must be kept in a written record Waste material generated on the airport site and resources used must be tracked and classified to meet the requirements of the sustainability targets outlined in the SM Sustainability Plan Regular site inspections must be carried out to monitor compliance with this Plan, record inspection results. Inspection logs will be provided to the DITRDC on request. 	Environment Manager Environmental Coordinator	Monitoring and inspection records	Construction



Element 3: Reporting

All staff, employees and subcontractors will actively drive complaint environmental performance of the SBT Works

Ref	Action	Scope	Responsibility	Timing
3.1	Completion Report	Reflecting the requirements of Condition 43.10 of the Airport Plan, Sydney Metro will prepare a Completion Report. CPBG will provide Sydney Metro with shapefiles of the Rail Construction Impact Zone shown in the EIA and Biodiversity Development Assessment Report at Appendix C of the EIA with a comparison to the refined construction footprint.	Environment Manager	Construction completion
3.2	Annual Compliance Report	Sydney Metro will prepare an Annual Compliance Report addressing its compliance with each condition set out in section 3.11.6 of the Airport Plan, including implementation of any Approved Plan. CPBG will provide all relevant documentation.	Environment Manager	Annually
3.3	Monthly Compliance Report	CPBG will provide Sydney Metro with a monthly summary of the weekly inspection outcomes with regards to the: <ul style="list-style-type: none"> • Management and compliance with the relevant Aboriginal cultural heritage management mitigation measures and controls • Management measures / issues identified for the reporting period with regards to European and other heritage • Exceedance of criteria (air quality, noise and vibration, soil and water) • Monitoring (including air quality, noise and vibration, soil and water, and waste and resources). 	Environment Manager	Monthly
3.4	Complaints Reporting	All complaints and stakeholder interactions will be recorded.	Stakeholder and Community Engagement Manager	As required
3.5	Environmental Site Register (required under the 6.02(3) of the AEPR)	An Environmental Site Register to be established and maintained to include written record of environmental conditions of the Airport and its environmental management generally. The register is to include the results of monitoring and a record of any exceptional incidents that cause excessive pollution and the action taken to resolve the situation.	Environment Manager	As required
3.6	Design Review	Records of any impacts avoided or minimised through design or construction methods.	Design Manager	Detailed design



Ref	Action	Scope	Responsibility	Timing
3.7	Annual Report (Biodiversity)	<p>In accordance with Condition 49 (4) Sydney Metro will publish each of the annual reports on its website within three months of the end of the period in respect of which the report was prepared, with evidence providing proof of the date of publication to the DITRDC and the Department of Agriculture, Water and the Environment (DAWE). The report must remain on the website for a period of at least 12 months.</p> <p>An annual report is also to be prepared and managed in accordance with section 6.03 of the AEPR.</p> <p>CPBG will provide all relevant documentation.</p>	Environment Manager	Annually
3.8	Part 13 Report	<p>Sydney Metro will document compliance with the conditions of the EPBC Act Part 13 Permit (E2021-0187).</p> <p>CPBG will provide all relevant documentation.</p>	Environment Manager	6 months after expiry of Permit
3.9	Post Clearance Report	CPBG will validate the type and area of vegetation cleared including confirmation of the number of hollows impacted. Any relevant Geographical Information System files will be included.	Environment Manager	Within one month of the completion of clearing within each biodiversity offset area (as defined in the Airport Biodiversity Staging Report)
3.10	Pollution and or excessive noise reporting	<p>In accordance with the Airports (Environment Protection) Regulations 1997 (AEPR), Sydney Metro must give an airport environment officer for the airport, within 14 days, a written report in the event that monitoring results indicate pollution, or excessive noise, occurring as a result of the undertaking of the works associated with the Stage 1 development. The trigger for a 'pollution event' is provided in the relevant schedules of the AEPR.</p> <p>CPBG will provide all relevant documentation.</p>	Environment Manager	Within 14 days of a pollution or excessive noise event



Ref	Action	Scope	Responsibility	Timing
3.11	Reporting of non-conformances and improvement opportunities	The management and reporting requirements of environmental non-conformances and improvement opportunities will be in accordance with Section 3.17 of the CEMF.	Environment Manager	As required
3.12	Groundwater Monitoring Report	<p>A quarterly groundwater monitoring report will be compiled based on the groundwater monitoring activities. The reports will be reviewed by the SM Environment Manager and any potential exceedances (as noted in the report) will be reported to the DITRDC and managed accordingly. As a minimum, the quarterly monthly groundwater monitoring report will include the following:</p> <ul style="list-style-type: none"> • Date, location (well) and time of the sampling event • Description of the weather and any potential influencing conditions • Factual reporting including lab results and groundwater elevation plots • Interpretation of the results and comparison against the relevant criteria, including identification of any water quality exceedances and potential sources of the exceedance. 	Environment Manager	Quarterly
3.13	Reporting of material harm pollution events	<p>Notify the NSW EPA of pollution incidents where there is a risk of 'material harm to the environment', as defined in section 147 of the POEO Act:</p> <p>"(a)...harm to the environment is material if:</p> <p>(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or</p> <p>(ii) It results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and</p> <p>(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment."</p>	Environment Manager	As required
3.14	Recording of exceptional incidents	Record in a log book any exceptional incidents that cause excessive traffic delays on local road network and the action taken to resolve the situation.	Traffic Manager	As required



Ref	Action	Scope	Responsibility	Timing
3.15	Reporting and Tracking of Material	<p>A material tracking report must be prepared which records:</p> <ul style="list-style-type: none"> • The location, quantity and timing of material placed into stockpiles areas • The movement of materials within site, including date, time, quantity, source location and placement location • Materials imported onto the site • Any material disposed off-site, including classification, EPL of destination waste facility, disposal dockets, date and time, disposal contractor details consignment details. 	Environment Manager	Monthly



Element 4: Auditing, review, and improvement

We will continually improve our environmental systems and environmental performance by monitoring and reviewing their effectiveness

Expectations	How will CPBG meet the Expectation?	Responsibility	Deliverables
1.3. Review this Sub-Plan to ensure compliance	Review of this Plan will be undertaken in accordance with the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinator	Plan updates
1.4. Audits are undertaken to ensure compliance with the requirements of this Plan	Audits will be performed in line with the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002), and this Plan will be updated if required. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinators	Audit Reports Corrective Action Reports
1.5. All non-compliances are reported and actioned	Where a non-conformance is raised as part of an audit, incident or complaint investigation, the audit, incident or complaint report may be used to close out the non-conformance and it is not necessary to raise a separate non-conformance reporting process. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	Environment Manager Environmental Coordinators	Corrective Action Reports Complaint Reports Incident Reports Audit Reports



Element 5: SMWSA CEMP Requirements

Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
Aboriginal Cultural Heritage					
AH_01	The possible scarred tree (B40) and the grinding groove site (B120) will be conserved in situ within an Environmental Conservation Zone (ECZ) at the Airport Site. A low barrier fence, which does not obstruct pedestrian traffic, will be erected around specific heritage sites as necessary to demarcate the area as a no-go zone for vehicles. The barrier will be situated so that it does not intrude upon the immediate visual and landscape quality of the heritage sites and their surrounds.	Include details of the sites on relevant Environmental Control Maps (ECMs). Project induction to identify the ECZ as a no-go area.	Environment Manager	ECM Induction program and records	Pre-construction Construction
AH_02	The ECZ will be managed by SM for the protection and conservation of known and predicted Aboriginal heritage sites and values consistent with the objectives of that zone to enhance, restore and protect the cultural values of the land.	Include details of the sites on relevant ECMs. Project induction to identify the ECZ as a no-go area.	Environment Manager	ECM Induction program and records	Pre-construction Construction
AH_03	Sensitive areas must be delineated on environmental constraints plans and EWMSs and to ensure they are not subject to disturbance during construction.	Include details of the sensitive areas on relevant ECMs. Project induction to identify the ECZ as a no-go area.	Environment Manager	ECM Induction program and records	Pre-construction Construction
AH_04	Protocols will be developed and implemented for the unanticipated discovery of Aboriginal objects, and for the discovery of any suspected human remains for all Main Construction Works involving ground disturbance.	Implement the WSA Unexpected Finds Protocols Procedure	Environment Manager Environmental Coordinators Site Supervisors	Unexpected Finds records and reports	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AH_05	Training in the identification of Aboriginal artefacts and management of Aboriginal heritage values will be included in compulsory induction courses for site workers. The content of this component will vary according to the stage of construction. After the completion of major cut and fill actions, training may focus on the management of spoil where there is a risk of impacting artefacts, and on no-go areas, where relevant.	Project induction to include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values.	Environment Manager	Induction program and records	Pre-construction Construction
European and Other Heritage					
EH_01	Known European and Other Heritage items located outside of the Project disturbance area, however within proximity to the construction activities (where appropriate), will be protected.	Where appropriate, the boundaries of heritage sites that are located within, outside of, but near, the SBT worksites will be clearly marked with star pickets/pegs and high visibility flagging tape, reflected on the ECM and referenced in the project induction.	Environment Manager Environmental Coordinators Site Supervisors	ECMs Induction program and records	Pre-construction Construction
EH_02	Cultural plantings will be investigated to identify and collect samples of plant varieties that have local or historic botanical significance, including plant varieties that are characteristic of the area or not otherwise broadly planted. A list of relevant identified plant species would need to be identified and consideration given to future landscaping (refer to the Visual and Landscaping CEMP). Other considerations include weed mitigation and not attracting birdlife.	Landscaping works are not within the scope of the SBT Works.	N/A	N/A	N/A
EH_03	Protection of any subsurface items / structures not removed during the survey and salvage works for the heritage items, particularly items associated with the following (refer to Section 5): AS1 - Pennell's Property AS2 - Gardiner Road farm complex AS3 -	The former location of identified heritage items will be included on ECMs. Prior to works commencing in the	Environment Manager	ECMs Induction program and records	Pre-construction Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	Badgerys Creek Public School AS4 - Badgerys Creek butchery AS7 - Badgerys Creek Uniting Church and Cemetery AS8 – St Johns Anglican Church and Cemetery AS17 - Badgerys Creek Road Alignment	vicinity of the former location of heritage items, all workers on site will be informed of the potential presence of sub-surface items / structures that were not completely removed during the survey and salvage works. In the event of any potential heritage finds, the unexpected finds protocol will be implemented.	Environmental Coordinators Site Supervisors		
EH_04	Heritage awareness training will be provided to all works involved in site preparation and construction of the airport site.	Project induction to include heritage awareness training.	Environment Manager	Induction program and records	Pre-construction Construction
EH_05	A procedure will be developed and followed if European heritage items are discovered during construction.	The Procedure for Discovery of European Heritage Items will be implemented if European heritage items are discovered during construction (refer to Section 8.5 of the SMWSA European and Other Heritage CEMP).	Environment Manager Environmental Coordinators Site Supervisors	Unexpected finds records	Pre-construction Construction
EH_06	Recognising the possibility of unmarked graves occurring, a procedure will be developed and followed if human remains are discovered at the airport site during construction.	The Procedure for Discovery of European Heritage Items will be implemented if human remains are discovered during construction (refer to Section 8.5 of the SMWSA	Environment Manager Environmental Coordinators Site Supervisors	Unexpected finds records	Pre-construction Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		European and Other Heritage CEMP).			
Air Quality					
AQ_01	Training will be provided to all project personnel, including relevant subcontractors on air quality control practices and the requirements from this Plan through inductions, toolboxes and targeted training.	Project induction and toolbox talks to include training on air quality control practices.	Environment Manager	Induction program and records Toolbox talk records	Pre-construction Construction
AQ_02	The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides outside of the defined treatment area.	Project induction to include training on air quality control practices.	Environment Manager	Pesticide records	Construction
AQ_03	Ensure there is no burning of any materials on site.	Project induction to include training on air quality control practices.	Environment Manager	Environmental Inspection Checklists	Construction
AQ_04	Ensure that works meet the requirements under Schedule 1 of the Airports (Environment Protection) Regulations 1997	Air quality monitoring, consistent with the WSA Air Quality CEMP will be carried out during construction to ensure that works meet the requirements under Schedule 1 of the <i>Airports (Environment Protection) Regulations 1997</i> (refer to Element 2).	Environment Manager Environmental Coordinators	Monitoring records	Construction
AQ_05	Dust management measures will be implemented to mitigate the impacts of dust during construction, including the following: Avoid site run-off of water or mud to reduce the potential for track-out dust emissions.	ECM to include dust management details. Project induction to include training	Environment Manager Environmental Coordinators	ECM Induction program and records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_06	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays.	on air quality control practices.	Site Supervisors		
AQ_07	Ensure adequate water will be made available on the site for effective dust and particulate matter suppression and mitigation, using non-potable water where possible. Water suppression will be used for active earthwork areas, stockpiles, unsurfaced haul roads and loads of soil being transported to reduce wind-blown dust emissions.				
AQ_08	Use enclosed chutes and conveyors and covered skips where appropriate.				
AQ_09	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment, and use fine water sprays on such equipment wherever appropriate.				
AQ_10	Make equipment readily available on-site to clean up spillages as soon as reasonably practicable after the event.				
AQ_11	Vegetation clearing will be staged where possible to minimise the area and time that surfaces are exposed. Minimise stockpiling of material. Stockpiles will be located away from sensitive receivers where practicable.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction
AQ_12	Exposed surfaces with no scheduled work will be treated to minimise dust generation. Exposed surfaces will be stabilised progressively using the most practical site-specific methods, including watering and geo-fabrics for short-term exposure and emulation spray, spray grass, soil compaction and revegetation for longer term exposed areas or final finishes. Revegetate earthworks and exposed areas or soil stockpiles as soon as practical.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_13	Avoid scrabbling (roughening of concrete surfaces) where practicable.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_14	Store sand and other aggregates in bunded areas and not allowing them to dry out unless required for purposes.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_15	Deliver bulk cement and other fine powder materials in enclosed tankers and storing them in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_16	Seal and appropriately store bags of any fine powder materials.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_17	Construction activities will be modified, reduced or controlled during high or unfavourable wind conditions if they have a potential to increase off-site dust generation.	Meteorological conditions will be continuously monitored.	Site Supervisors Environmental Coordinators	Monitoring records	Construction
AQ_18	Use water-assisted dust sweeper(s) on the access and local roads to remove, as necessary, any material tracked out of the site. This may require the sweeper to be continuously in use.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_19	Avoid dry sweeping of large areas.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_20	Seal high use haul roads, regularly inspect and make necessary repairs to the surface as soon as reasonably practicable.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_21	Record all inspections of haul routes and any subsequent action in a site log book.	Inspections to be recorded in the Site Log Book	Site Supervisors	Site Log Book	Construction
AQ_22	Regularly clean and damp down hard surfaced haul routes with fixed or mobile sprinkler systems or mobile water bowsers.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_23	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud) prior to leaving the site. The location of wheel wash to be shown on ECMs.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_24	Provide an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_25	Locate site access points as far as practicable from sensitive receptors.	This requirement will be reflected in the Construction Area Plans.	Project Manager Site Supervisors	Construction Area Plan	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_26	Hardstand areas and surrounding public roads will be cleaned, as required, using methods including brooms, bobcat attachments or street sweepers.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_27	Implement measures to minimise dust, soil or mud from being deposited by vehicles on public roads including stabilised site access (rumble grids, concrete and/or large aggregate) at entry/exit points. Manual cleaning will also be carried out where appropriate. In the event of any spillage or tracking, the spilt material will be removed immediately and in accordance with the environmental incident classification and reporting procedure.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_28	Vehicle movements will be confined to designated haul roads and areas. These roads will have speed limits of 40 km/h in order to reduce dust generation. Reduced speed limit may be implemented where dust generation persists.	Requirement will be reflected in site-specific Construction Traffic Management Plans (CTMP).	Traffic Manager Site Supervisors	CTMP	Construction
AQ_29	All loaded haulage trucks will be covered where there is a risk of release of dust or other materials on public roads.	Requirement will be reflected in site-specific CTMPs.	Traffic Manager	CTMP	Construction
AQ_30	All vehicles will be switched off when not in operation. Where practical lower vibration generating items of excavation plant and equipment shall be used.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_31	Engines of plant parked next to residents will be switched off when not in operation.	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_32	Avoid the use of diesel- or petrol powered generators and instead use mains electricity or battery powered equipment, where practicable.	Construction equipment will be ordered before the works are to be undertaken to ensure the appropriate equipment is available.	Project Engineers Site Supervisors	Procurement records	Pre-construction Construction
AQ_33	Implement measures to support and encourage sustainable travel for construction workers to and from the airport site, including public transport, shuttle buses, cycling, walking, and car-sharing.	Sustainable travel to be addressed through toolbox talks.	Sustainability Manager	Induction and toolbox records	Construction
AQ_34	Daily monitoring of vehicle and plant is to be undertaken as a pre-start inspection	Before any vehicles / plant enter the construction site, they must provide confirmation of their daily pre-start inspection.	Site Supervisor	Plant and Equipment inspection records	Construction
AQ_35	Exhaust systems of construction plant, vehicles and machinery will be maintained in accordance with manufacturer's specifications to ensure that excessive visible exhaust emissions do not persist under normal operational loads of the plant and machinery.	Before any vehicles / plant enter the construction site, they must provide confirmation of their daily pre-start inspection.	Site Supervisor	Plant and Equipment inspection records	Construction
AQ_36	Periodic visual checks will be undertaken to ensure ongoing compliance, typically weekly. Where practicable, vehicles will be fitted with pollution reduction devices.	Before any vehicles / plant enter the construction site, they must provide confirmation of their daily pre-start inspection.	Site Supervisor	Plant and Equipment inspection records	Construction
AQ_37	Material brought to site will be in bulk from the suppliers, where practicable.	Procurement processes and checks during inspections.	Procurement Manager	Procurement records	Construction
AQ_38	Material will be sourced from local suppliers, where practicable.	Procurement processes and checks during inspections.	Procurement Manager	Procurement records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
AQ_39	No use of ozone-depleting substances is to occur.	Procurement processes and checks during inspections.	Procurement Manager	Procurement records	Construction
AQ_40	Develop and implement a construction logistics plan to manage the sustainable delivery of goods and materials to the airport site.	Construction logistics requirements to be addressed in the Sustainability Plan (SMWSASBT-CPG-1NL-EV-PLN-000001).	Sustainability Manager	Sustainability Plan (SMWSASBT-CPG-1NL-EV-PLN-000001)	Construction
AQ_41	Implement/ best practice odour management during relevant construction works including: <ul style="list-style-type: none"> The extent of opened and disturbed contaminated soil at any given time would be minimised Temporary coverings or odour suppressing agents would be applied to excavated areas where appropriate Regular odour monitoring would be conducted during excavation to verify that no offensive odours are being generated 	ECM to include this requirement. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
AQ_42	Dust extraction and filtration systems will be installed for tunnel excavation works and deep excavation with limited surface exposure.	Dust extraction and filtration systems will be designed and implemented in accordance with this requirement.	Construction Manager	Design drawings	Pre-construction
Biodiversity – General					
B_01	Pre-clearance surveys for threatened species will be undertaken by a qualified ecologist. Pre-clearance surveys will take into account suitable survey conditions for the threatened species present and / or potential within the Airport Site and include: <ul style="list-style-type: none"> Additional targeted searches of the construction impact zone for the Green and Golden Bell Frog 	Preclearance surveys completed by Leneco Pty Ltd in December 2021 (Leneco Ecological Surveys) identified one Plant Community Type (PCT) within the Spoil Site	N/A	N/A	Pre-construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Targeted searches of the CIZ for the Cumberland Plain Land Snail (in suitable conditions) and salvage and relocation of any snails and/or suitable shelter sites that are detected Searches for roosting bats at any bridges or culverts that need removal; Pre-clearing surveys for larger birds' nests, particularly the White-bellied Sea-Eagle and Little Eagle Targeted searches for threatened flora species in areas of appropriate habitat. 	(Grey Box – Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin Bioregion). The survey did not identify threatened flora individuals, populations or threatened fauna within the Spoil Site.			
B_02	Hold Point: A pre-clearing inspection must be conducted by a qualified ecologist and the clearance area delineated. Clearing of plant community types, threatened ecological communities, or threatened species must not exceed the amounts specified in the Biodiversity Development Assessment Report at Appendix C of the WSA EIA.	CPBG will conduct a pre-clearing inspection and prepare a Pre-clearing and Grubbing Permit prior to undertaking clearing works. The completed permit will be submitted to SM to assess compliance against the Biodiversity Development Assessment Report.	Environmental Coordinators Site Supervisors	Pre-clearing and Grubbing Permit	Pre-Construction
B_02	The detailed design and construction planning will demonstrate (where reasonable and feasible) that it has sought to minimise the extent of vegetation clearing within the Project boundary.	Construction Area Plans will be prepared with a view to minimise the extent of vegetation clearing within the Project boundary.	Construction Manager	Construction Area Plan	Pre-Construction
B_03	<p>The following measures will be taken to reduce the potential for adverse impacts on ecologically sensitive areas due to vegetation clearance and habitat loss:</p> <ul style="list-style-type: none"> Deferring vegetation removal until necessary 	ECM to include these requirements. Key controls to be reinforced through the induction and toolbox talks.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing						
	<ul style="list-style-type: none">▪ Locating site offices and stockpiles in already cleared and disturbed areas where possible, to avoid further unnecessary removal or disturbance of native vegetation and hollow-bearing trees▪ Providing maps to construction staff (ECMs) clearly showing vegetation clearing boundaries and exclusion/no-go zones▪ Engaging a suitably qualified ecologist or environmental officer prior to any clearing works that form part of the SBT Works to clearly demarcate vegetation protection areas▪ Implement the Unexpected Threatened Specific Procedure (Flora and Fauna Management Sub-Plan, Section 8.8) if threatened flora and fauna not previously recorded at the Airport Site are detected during SBT Works.										
B_04	Sensitive areas will be delineated on ECMs and EWMSs. These areas will be temporarily fenced. No materials storage or machinery entry or operation will be permitted within these areas, to ensure they are not subject to disturbance during construction. The ECZ will be demarcated with exclusion fencing and access will be restricted.	Sensitive areas (including the ECZ) will be temporarily fenced and delineated on ECMs.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction						
B_05	<div>During dam dewatering, undertake the following corrective actions in response to the performance indicators:</div> <table><tr><th>Performance Indicator</th><th>Corrective Actions</th></tr><tr><td>Mortalities of native aquatic fauna identified during dewatering activities</td><td>Monitor levels of dissolved oxygen during draining of the dams and undertake aeration of the waterbodies as necessary</td></tr><tr><td>Dam bed deemed unsafe to undertake fauna salvage</td><td>Excavate sumps/pits in the dam bed and drain water to the base level of the dam bed. Project ecologist (Aquatic) is to instruct</td></tr></table>	Performance Indicator	Corrective Actions	Mortalities of native aquatic fauna identified during dewatering activities	Monitor levels of dissolved oxygen during draining of the dams and undertake aeration of the waterbodies as necessary	Dam bed deemed unsafe to undertake fauna salvage	Excavate sumps/pits in the dam bed and drain water to the base level of the dam bed. Project ecologist (Aquatic) is to instruct	Performance indicators and corrective actions will be included in the relevant ECM.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction
Performance Indicator	Corrective Actions										
Mortalities of native aquatic fauna identified during dewatering activities	Monitor levels of dissolved oxygen during draining of the dams and undertake aeration of the waterbodies as necessary										
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Ref	Requirement		How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		excavator operators on the correct procedures to undertake the aquatic fauna salvage using the sumps/pits.				
	Aquatic fauna are identified by construction personnel following dam dewatering and salvage.	Contact the project ecologist (AMBS) to provide advice or attend the site to relocate.				
Biodiversity – Aquatic Flora and Fauna						
B_06	Implement the following protocol for dam decommissioning and dewatering: <ul style="list-style-type: none"> Identify suitable recipient sites for salvaged aquatic fauna within the locality of the Airport prior to commencement of decommissioning. Assess the water quality of the recipient site prior to release Implement the Green and Golden Bell Frog management plan requirements, as outlined in Section B12.2 of the SMWSA Biodiversity CEMP One week prior to decommissioning, conduct a pre-clearance survey of each dam to record water quality measurements, identify priority aquatic weeds, presence of waterbirds (including status of breeding/nesting), determine salvage equipment requirements and site safety considerations Where feasible, dam decommissioning should avoid nesting season. Discuss and implement any weed control measures, with particular focus on the prevention of the spread of Alligator Weed Alternanthera philoxeroides propagative material if detected 		CPBG will implement the requirements of the dam decommissioning and dewatering protocol.	Project Ecologist Environmental Coordinators Site Supervisors	Dam dewatering summary report	Pre-construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Notify the Project Ecologist and DPI Fisheries (in accordance with a current DPI Fisheries Research Permit) prior to commencement of dewatering Commence dewatering of the dams until the maximum depth of the dam is no greater than 1.2 metres. The dewatering should occur progressively over several days to allow fauna to relocate. The project ecologist is salvage aquatic fauna using a range of equipment to be determined by the prevailing site conditions including seine nets, fyke nets, dip nets, electrofishing and hand collection Pumping operations are to continue until the project ecologist is satisfied that fauna salvage operations are no longer required or ineffective The dam wall is to be broken to drain the remaining water, with any remaining aquatic fauna to be collected in fyke nets staked at the break in the dam wall Aquatic fauna salvaged during dewatering is then to be relocated to the identified recipient site(s) Removal of silt and capping of dam bed can then commence. 				
B_07	The collection, handling and storing of aquatic fauna will be undertaken by experienced aquatic ecologists and operate under an approved DPI Fisheries scientific collection permit.	CPBG will implement the requirements of the dam decommissioning and dewatering protocol.	Project Ecologist Environmental Coordinators	Dam dewatering summary report	Pre-construction
B_08	All aquatic vertebrate fauna collected will be identified to species level and any notes taken on their general condition including lesions, presence of Lernaea, ulcerations and fin deformities. Any species identified as Noxious under the <i>Fisheries Management Act 1994</i> (FM Act) and any moribund native species are to be euthanised, in accordance with animal ethics approvals. Animal	CPBG will implement the requirements of the dam decommissioning and dewatering protocol within the Spoil Site.	Project Ecologist Environmental Coordinators	Dam dewatering summary report	Pre-construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	ethics approvals (Animal Research Authority) is to have been issued by, and in accordance with, the Animal Care and Ethics Committee of the Secretary NSW Department of Primary Industry.				
B_09	All aquatic fauna is to be held in appropriately sized containers, tubs and buckets, fitted with aerators and shading to prevent overheating or asphyxiation of animals.	CPBG will implement the requirements of the dam decommissioning and dewatering protocol within the Spoil Site.	Project Ecologist Environmental Coordinators	Dam dewatering summary report	Pre-construction
B_10	Euthanasia of fish and larvae in the field will be undertaken in accordance with the Aquatic Flora and Fauna Management Plan (Appendix B of the SMWSA Biodiversity CEMP).	CPBG will implement the requirements of the dam decommissioning and dewatering protocol within the Spoil Site.	Project Ecologist Environmental Coordinators	Dam dewatering summary report	Pre-construction
Biodiversity – Fauna Handling and Rescue					
B_11	Implement the following procedure for clearing of vegetation: <ul style="list-style-type: none"> Prior to undertaking clearing, a pre-clearing assessment must be undertaken by the Project Ecologist to identify the presence or evidence of the presence of fauna (including fresh scats, scratches and remains of prey), including threatened species. The pre-clearing assessment must also include the identification and assessment of habitat trees affected by the clearing activities, including details on the checks by the project ecologist on trees for fauna, nests and the like. The assessment must include processes and actions to protect or rescue the identified fauna including koalas, bat colonies and roosts, glider dens and frogs and address all elements of the implementation, outcomes and effectiveness of the proposed fauna rescue procedure. 	CPBG will implement the requirements of the vegetation clearing procedure.	Project Ecologist Environmental Coordinators Site Supervisors	Pre-clearing permit	Pre-construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> All hollow bearing trees, potential hollow bearing trees and all other fauna containing habitat trees, including trees with nests, dreys and termitaria likely to be occupied by fauna, must be marked at least 7 days prior to the commencement of clearing in a manner which clearly identifies and demarcates the trees. Non-habitat trees must be removed at least 48 hours before habitat trees are removed. Habitat trees should be inspected by Project Ecologist prior to removal to ensure animal exodus. Excavator operator to knock or disturb the habitat tree prior to felling, with the intent to encourage the passive removal of fauna from hollows and nests. Habitat trees must be carefully felled at least 48 hours after Stage 1 to allow fauna an opportunity to move from habitat trees and allow time to concentrate rescue efforts on the trees that are most likely to be inhabited. Habitat trees must be felled using equipment that allows the trees to be lowered to the ground with minimal impact (e.g. claw extension). All habitat trees must be felled under the supervision of the Project ecologist. Felled trees must be left for a short period of time, determined by the Project ecologist, to give any fauna trapped in the trees an opportunity to escape. Injured fauna is to be taken to a local vet or a WIRES representative is to be contacted as soon as possible. 				
B_12	If wildlife is discovered during site construction activities, including clearing, that may harm, or has resulted in harm, to the animal or pose a risk to site personnel, implement the requirements of the Rescue Procedure and Handling Procedure detailed in Appendix B (Section B5.3 and B5.4) of the SMWSA Biodiversity CEMP. If deceased fauna is identified, implement the requirements of	CPBG will implement the requirements of the Rescue Procedure, Handling Procedure and Deceased Fauna Procedure (where	Environmental Coordinators Project Ecologist	ECM	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	Deceased Fauna Procedure in Appendix B (Section B5.5) of the SMWSA Biodiversity CEMP.	relevant). References will be included in the ECM.	Site Supervisors		
Biodiversity – Weed and Disease					
B_13	<p>The following controls are to be implemented prior to clearing vegetation to minimise the spread of weeds and diseases:</p> <ul style="list-style-type: none"> Tools to be cleaned of soil and plant material prior to bring tools to site or moving between works areas Vehicle/machine hygiene inspections are to be undertaken prior to works starting to determine if vehicles are free from soil and plant material (document on a hygiene inspection form) Vehicles to be parked in designated roadsides and parking spaces only Completed hygiene inspection forms are to be kept within the relevant vehicle/machine during the works and provided to the relevant land access officers at completion of the works. 	ECMs to include these requirements. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors	Hygiene Inspection Form ECM	Construction
B_14	<p>The following controls are to be implemented during construction to minimise the spread of weeds and diseases:</p> <ul style="list-style-type: none"> Avoid or limiting vehicle / foot traffic through areas identified as having biosecurity matters present, if feasible Limit access between and across vegetated areas to formed roads wherever practicable Minimise entry and exit points from sites determined as supporting biosecurity matters Vehicle/machine wash down, and completion of hygiene inspection must be undertaken prior to accessing a new vegetation clearing site. 	ECMs to include these requirements. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors	Hygiene Inspection Form ECM	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Regular visual checks of PPE and vehicle tyres for plant parts and seed All plant material and soil removed is to be bagged and disposed of in landfill or at a registered green-waste facility Tools to be cleaned free of soil and plant material upon completion of works at each property 				
B_15	<p>General weed management measures to be undertaken include:</p> <ul style="list-style-type: none"> Use a range of weed management methods such as clearing, slashing or mowing (physical and mechanical control) as well as a range of herbicides (to avoid herbicide resistance) Mow/slash areas infested with weeds before they seed (avoiding native vegetation) Securely cover loads of weed-contaminated material Dispose of weed contaminated soil at an appropriate waste management facility Remove weeds immediately and dispose of without stockpiling Separate weeds from native vegetation to be mulched, do not use weed material for mulch Minimise soil disturbance in weed infested areas 	ECMs to include these requirements. Key controls to be reinforced through the induction and toolbox talks.	Site Supervisors	Environmental inspection checklist	Construction
B_16	Prior to weed removal, a pre-clearance inspection report is required to outline the recommended treatment methods. Use of herbicides must be according to the <i>NSW Pesticides Act 1999</i> , Material Safety Data Sheets and labelling instructions. Application records must be retained. Any contractors using herbicides on the site must be trained and appropriately qualified to do so (ChemCert Level 2 or equivalent for subordinates and ChemCert Level 3 or equivalent for supervisors). Refer to Appendix C (Section C4.4) of the SMWSA	A pre-clearance inspection report will be prepared prior to weed treatment and pesticide application records will be retained.	Project Ecologist Site Supervisor	Pre-clearance report Pesticide application records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	Biodiversity CEMP for the recommended treatment methods for the Biosecurity Act priority weeds.				
Biodiversity – Bushfire Management					
B_17	<p>The following controls are to be implemented during construction to minimise bushfire risk:</p> <ul style="list-style-type: none"> No smoking on-site except at designated areas All works involving a fire source to have a hot works permit in place with specific controls to prevent risk of a fire Supply of water to be available at all times for firefighting purposes. Supply points will be communicated with local firefighting authorities Emergency response procedure to be implemented and detailed in an Emergency Management Plan Contractors will not undertake cutting, welding or grinding on total fire ban days. Exemptions will be considered where an application for exemption has been approved by the RFS or where exemptions are gazetted. Where exemptions are granted then the works must take place in an area at least 50m away from an ignition source and appropriate firefighting controls are in place All entry points into the site are to be shut to prevent unauthorised vehicle access and torching Fire extinguishers available on all plant and equipment and in areas where maintenance is conducted Vehicles will not be driven or idled in areas of long grass on fire ban days or after prolonged periods of dry weather 	Key requirements are reflected in the Emergency Response Plan (SMWSASBT-CPG-1NL-NL000-SF-PLN-00004) and will be reinforced through inductions and toolbox talks.	<p>Safety Manager</p> <p>Project Managers</p> <p>Site Supervisors</p>	<p>Emergency Response Plan (SMWSASBT-CPG-1NL-NL000-SF-PLN-00004)</p> <p>Induction and toolbox records</p>	Construction
Noise and Vibration					
NV_01	Training will be provided to all project personnel, including relevant sub-contractors on noise and vibration requirements of this Plan.	Refer to Element 1 of this Plan for training requirements	Environment Manager	Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
			Environmental Coordinators		
NV_02	Public address systems used at any construction site will not be used outside normal construction hours, except where prior consultation has been undertaken with potentially affected residents or in the case of emergency. Public address systems would be designed to limit noise spillage off- site.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_03	Work compounds and their associated layout, parking areas, equipment and material stockpile sites will be positioned away from noise-sensitive locations.	Control to be reflected in the Construction Area Plans.	Project Managers	Construction Area Plans	Construction
NV_04	Site entry and exit points will be located as far as possible from sensitive receivers where possible, considering the importance of safe access.	Control to be reflected in the Construction Area Plans.	Project Managers	Construction Area Plans	Construction
NV_05	Where possible, the compounds, refuelling areas and areas near potentially noise and vibration sensitive receivers, will be designed to promote one-way traffic so that vehicle reversing movements are minimised.	Control to be reflected in the Construction Area Plans.	Project Managers	Construction Area Plans	Construction
NV_06	Site training / toolbox talks will reinforce expected behavioural practices on site such as no swearing or unnecessary shouting or loud stereos/ radios on site, no dropping materials from height where practicable, no throwing of items and no slamming of doors.	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_07	Where possible, work will be undertaken within the standard construction hours of: 7am – 6pm, Monday to Friday; 8am – 1pm Saturday	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<p>No work on Sunday or public holidays unless approved through the out of hours process which is described in section 10 of the Noise and Vibration CEMP.</p> <p>Where complaints are received in response to high noise activities (eg. Rock breaking) respite periods will be applied (e.g. 3 hours of work with 1 hour of no high noise work).</p> <p>Work generating high noise and/or vibration levels will be scheduled during less sensitive time periods.</p>				
NV_08	<p>Construction Planning will provide for adequate respite periods for Sensitive Receptors from noise and vibration associated with construction activities.</p> <p>No blasting activity shall be undertaken during the hours of 5 pm to 9 am on weekdays, on weekends (other than 9 am to 1 pm Saturdays) and on public holidays.</p>	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_09	Where acoustic sheds are installed, the internal lining and type of material used in the construction of the sheds would be considered during design development and construction planning to ensure appropriate attenuation is provided.	Acoustic sheds will be designed in accordance with this requirement.	Design Manager	Design drawings	Construction
NV_10	Undertake saw-cutting operations during standard work hours wherever possible to minimise noise impacts.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_11	Plant or machinery will not be permitted to 'warm-up' before the nominated working hours.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
NV_12	Avoiding queueing and switch off engines when equipment is not in use for extended periods (ie 30 minutes).	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_13	Where possible, the occurrence of consecutive noisy works within the same locality, and/or noisy plant/equipment working close together in the same locality will be avoided or otherwise minimised.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_14	Where possible high noise generating work (such as use of a concrete saw or hydraulic hammer) will be undertaken during standard construction hours, even in the event of an Out of Hours Works (OOHW) approval.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_15	Manually adjustable or ambient noise sensitive or 'quacker' type reversing alarms on plant and/or flashing lights will be used at night.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_16	Where possible, work will be undertaken away from noise sensitive receivers.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_17	All construction plant and equipment used on the site will be, in addition to other relevant requirements: <ul style="list-style-type: none"> Fitted with properly maintained noise suppression devices in accordance with the manufacturer's specifications Maintained in an efficient condition 	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Operated in a proper and efficient manner. 				
NV_18	Loading and unloading will be carried out as far as practical away from sensitive receivers. When loading trucks, materials are to be placed into trucks as far as practical, rather than dropped from a height.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_19	Truck movements will be kept to a minimum, i.e. that trucks are sufficiently utilised for each trip. Travel will be via internal haul routes where practicable and not queue near residential dwellings.	Control to be included in ECMs, CTMPs and reinforced through the induction/toolbox talks.	Site Supervisors Traffic Manager	CTMP ECM Induction and toolbox records	Construction
NV_20	Noisy and vibration generating plant working simultaneously close together will be avoided to the greatest extent practical adjacent to noise affected / vibration sensitive receivers.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_21	Where practical, at the end of shifts, excavation and/or ripping plant will be taken from their work areas and left overnight away from the immediate vicinity of sensitive receivers. Warming up of the plant will then be conducted away from such receivers.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_22	Truck will limit compression braking as far as practicable.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_23	Where possible, noise generating equipment will be strategically positioned to take advantage of natural screening from geographical features, earthwork features (e.g. stockpiles) or other structures to	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	reduce the transmission of noise between work sites and receiver locations.		Environmental Coordinators		
NV_24	Construction activities which are predicted to exceed any noise management levels will be identified.	Noise monitoring and modelling will be undertaken to identify NML exceedances.	Environmental Coordinators	Noise monitoring Noise modelling	Construction
NV_25	Selection of less noisy plant and equipment and less noise emitting construction methods, where feasible.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_26	Structures (site sheds, stockpiles / bunds, hoarding) will be used where possible to shield residential receivers from noise.	Control to be reflected in the Construction Area Plans.	Project Managers	Construction Area Plans	Construction
NV_27	All complaints received will be managed in accordance with the Community Communications Strategy.	Relevant requirements are detailed in the CPBG Community Communication Strategy (SMWSASBT-CPG-1NL-NL000-CY-PLN-000002).	Stakeholder and Community Engagement Manager	Complaints register	Construction
NV_28	Affected receivers will receive notifications for construction activities likely to affect their amenity through noise and vibration.	Relevant requirements are detailed in the CPBG Community Communication Strategy (SMWSASBT-CPG-1NL-NL000-CY-PLN-000002).	Stakeholder and Community Engagement Manager	Community notifications	Construction
NV_29	Maintain positive, cooperative relationships with schools, childcare centres, local residents and building owners.	Relevant requirements are detailed in the CPBG Community Communication Strategy (SMWSASBT-CPG-	Stakeholder and Community	Consultation Manager	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		1NL-NL000-CY-PLN-000002).	Engagement Manager		
NV_30	Quantitative noise and vibration impact assessments will be carried out prior to construction. Where a potential exceedance of the construction noise and vibration management levels is identified, additional mitigation measures (such as individual briefings, letter box drops, phone calls, emails and specific notifications to affected sensitive receivers) would be considered.	Detailed Noise and Vibration Impact Statements (DNVIS) will be prepared prior to construction.	Environmental Coordinators	DNVIS	Construction
NV_31	All complaints handling would be in accordance with the Sydney Metro Overarching Community Communications Strategy and Construction Complaints Management System and in consultation with Western Sydney Airport.	Relevant requirements are detailed in the CPBG Community Communication Strategy (SMWSASBT-CPG-1NL-NL000-CY-PLN-000002).	Stakeholder and Community Engagement Manager	Consultation Manager	Construction
NV_32	Noise monitoring would be carried out where a potential exceedance of the construction noise management levels has been identified.	Monitoring requirements detailed in Element 2 will be implemented during construction.	Environmental Coordinators	Monitoring records	Construction
NV_33	Vibration monitoring would be carried out at the nearest affected receiver where it is anticipated that an item of plant would exceed the cosmetic damage or human response/ground-borne noise criteria.	Monitoring requirements detailed in Element 2 will be implemented during construction.	Environmental Coordinators	Monitoring records	Construction
NV_34	For work activities considered to be noisy (eg. hammering, grinding etc – excluding blasting), where noise levels at the receiver are above LA10,15min 75 dB(A), adopt an 8:30am start and a 5:00pm finish with two one-hour respite periods starting at 11.30am and 2pm respectively. Saturday works will commence at 8:00am and finish at 1:00pm with a one-hour respite period starting at 11:00am.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
NV_35	There is to be no blasting activity during the hours of 5:00pm to 9:00am on weekdays, on weekends (other than 9:00am to 1:00pm Saturdays) and on public holidays.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
NV_36	Project specific mitigation would include consideration of acoustic sheds with suitable noise attenuation.	The requirement for acoustic sheds will be assessed as part of the DNVIS.	Environmental Coordinators	DNVIS	Construction
NV_37	Prepare an OOHW Permit four weeks prior to undertaking OOHW Works and submit to the WSA Environmental Manager. WSA will notify the community in accordance with the Community and Stakeholder Engagement Plan.	OOHW Works will be conducted in accordance with this requirement.	Project Engineers Environmental Coordinators	OOHW Permit	Construction
Soil and Water					
SW_01	<p>As part of the detailed design process for the Stage 1 Development, a surface water management system will be developed. Development of a surface water management system for the Airport Site may involve a progressive process of design and implementation covering both the construction and operational phases. This may include the implementation of temporary system elements specifically for the construction phase. The system will include:</p> <ul style="list-style-type: none"> A detailed design of basins and channels to capture the majority of runoff, including during construction Refined drainage system design performance standards to optimise capacity and release timing, mimicking natural flows as far as practicable. Separate bio-retention basins to provide additional treatment for low flows and separation of these features 	<p>Construction sediment basin design capacities are calculated using the Blue Book RUSLE equation for the 80th Percentile 5-Day rain event (27.6mm).</p> <p>Water flow will be directed around disturbed site areas, stockpiles and contaminated areas so as to prevent the management of additional water and potential ERSED issues.</p> <p>Additional water retention and erosion and sediment</p>	Project Manager Environment Manager Environmental Coordinators	ESCP Discharge Impact Assessment	Pre-Construction Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<p>from the drainage system to protect contained water during flood events</p> <ul style="list-style-type: none"> Where there is insufficient space for the provision of on-site detention, the upgrade of downstream infrastructure would be implemented where feasible and reasonable Pollutant traps to prevent debris and other coarse material entering the drainage system Stabilisation structures at outlets to include rock check dams at regular intervals along channels and energy dissipaters at basin outlets Capacity for containment of accidental leaks or spills in the drainage system at maintenance areas, fuel farms or other areas where fuels or chemicals are stored or handled in accordance with Australian standards Measures to address impacts on downstream and upstream uses, including sensitive environmental values Measures to address impacts on downstream and upstream uses, including sensitive environmental values Measures to address impacts on downstream and upstream uses, including Volumes and sources of construction water Processes for treatment and discharge of any water from site and associated monitoring, reporting and regulatory approval requirements 	<p>controls will be implemented throughout the catchment in accordance with the ESCP.</p> <p>Water treatment plants will be designed according to ANZECC/ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines.</p> <p>Treated water that cannot be recirculated will be discharged from the sites via construction water treatment plants. The reuse of treated water would be maximised during the construction works. Where surplus treated water needs to be discharged from the sites, subject to the relevant performance outcomes, it may be discharged to Badgerys Creek via Western Sydney International swale.</p> <p>ESCPs will be developed in consultation with a Soil Conservationist.</p>			
SW_02	ESCPs will be reviewed by the Project Soil Conservationist or a Certified Professional in Erosion and Sediment Control (CPESC) for	ESCPs will be developed in consultation with a Soil Conservationist.	Environment Manager	ESCP	Pre-construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	all works involving soil disturbance unless the Airport Environment Officer agrees that soil and water risks do not warrant this. ESCPs will be prepared in accordance with the 'NSW OEH Blue Book – Managing urban stormwater: soils and construction'.		Environmental Coordinators Project Engineers		Construction
SW_03	A protocol will be developed and implemented to respond to and remedy leaks or spills.	CPBG will implement the Spill Management Procedure (SMWSASBT-CPG-SWD-SW000-CT-PRO-000002) in the event of a leak or spill.	Environmental Coordinators Site Supervisor	Incident reports	Pre-construction Construction
SW_04	The risk posed by PFAS contamination will be identified and if necessary, the Contractor environmental management plan is to include soil, groundwater and surface water PFAS contamination monitoring requirements, testing and disposal procedures consistent with relevant Commonwealth environmental management guidance on PFOS and PFOA as prepared by the Environment Department.	Ongoing monitoring of PFAS will be undertaken by: <ul style="list-style-type: none"> Testing for PFAS in groundwater, as per the Ground Water Monitoring program Testing in surface water Material to be removed from site, or to be used within the site, near roadways will be sampled for PFAS before reuse/export is authorised. 	Environment Manager Environmental Coordinators	Monitoring records	Pre-construction
SW_05	A groundwater management plan is to be developed and implemented identifying: <ul style="list-style-type: none"> Details of work that intercepts groundwater or requires groundwater extraction 	CPBG will undertake works in accordance with the Sydney Metro Groundwater Management Plan (refer to	Project Manager Environment Manager	Groundwater Management Plan	As required



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> An assessment of aquifer impacts resulting from groundwater interception or extraction Extraction methodology and management measures for discharge Groundwater monitoring and inspection programs. 	relevant controls in this table).	Environmental Coordinators		
SW_06	<p>To mitigate the impacts associated with groundwater inflows to excavations including stations and crossovers, the following measures will be implemented:</p> <ul style="list-style-type: none"> Groundwater inflows including to stations and crossovers will be reused or released with appropriate treatment Where groundwater from excavations including stations and crossovers is released to surface waters, treatment will be undertaken to bring water pollution below the accepted limits set out in the AEPR or any local standards Corrective measures will be developed and implemented to supplement groundwater supplies in the unlikely event of impacts to dependent vegetation or watercourses due to drawdown across excavations including stations and crossovers 	Groundwater inflows will be managed in accordance with the Soil and Water Management Sub-Plan (SMWSASBT-CPG-1NL-NL000-WA-PLN-000002) and the Water Reuse and Discharge Management Procedure (SMWSASBT-CPG-SWD-SW000-WA-PRO-000003)	Project Manager Environment Manager Environmental Coordinators	Water discharge monitoring records	Construction
SW_07	A remedial action plan and unexpected finds protocol will be established as a contingency to facilitate the quarantining, isolation and remediation of contamination identified throughout the construction program.	CPBG will implement the Sydney Metro Unexpected Contamination Find Protocol (SMWSA Soil and Water CEMP, Appendix C) in response to contamination and prepare a Remedial Action Plan were necessary.	Environment Manager Environmental Coordinators	Unexpected finds records Remedial Action Plan	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
SW_08	Any asbestos identified on site will be managed in accordance with applicable regulatory requirements including the <i>Work Health and Safety Regulation 2011</i> (NSW) and applicable guidelines.	CPBG will implement the Sydney Metro Unexpected Contamination Find Protocol (SMWSA Soil and Water CEMP, Appendix C) in response to asbestos finds.	Environment Manager Environmental Coordinators Site Supervisors	Asbestos clearance reports	Construction
SW_09	Any material requiring off-site disposal shall be done in accordance with the Waste and Resources CEMP.	Waste will be disposed in accordance with the SMWSA Waste and Resources CEMP.	Environment Manager Environmental Coordinators Site Supervisors	Waste classification reports Waste disposal records	Construction
SW_10	Waste classification details for any waste material removed from site shall be documented and maintained on project records (in accordance with the NSW Waste Classification Guidelines, 2014).	Waste will be classified in accordance with the SMWSA Waste and Resources CEMP. NSW Waste Classification Guidelines, 2014.	Environment Manager Environmental Coordinators	Waste classification reports	Construction
SW_11	Impacts associated with erosion and sediment will be mitigated through: <ul style="list-style-type: none"> Implementation of ESCPs Installing a site drainage system prior to commencement of Bulk Earthworks Minimising the surface area disturbed at any one time by, where practical, staging construction works and stabilising soils with vegetation or appropriate cover materials Establishing erosion and sediment controls in accordance with the 'NSW OEH Blue Book – Managing urban stormwater: soils and construction' 	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Mulching cleared vegetation for use in erosion control at construction sites Covering and stabilising soil stockpiles with vegetation or mulch Stockpiling topsoil at a maximum height of two metres, where practicable Distributing and seeding topsoil over landscaped areas at the completion of Bulk Earthworks and ensuring batter slope gradients and surface treatments have been designed to minimise erosion risk. 				
SW_12	<p>To minimise the risk of leaks or spills the following mitigation measures will be put in place:</p> <ul style="list-style-type: none"> Maintenance areas, fuel farms and other areas where fuels or chemicals are stored or handled will be bunded to contain any accidental spills or leaks Fuel and other chemicals will be stored and handled in accordance with relevant Australian standards such as AS 1940-2004 The storage and handling of flammable and combustible liquids, AS/NSZ 4452:1997 The storage and handling of toxic substances, AS/NZS 5026:2012 The storage and handling of Class 4 dangerous goods; and AS/NZS 1547:2012 On-site domestic wastewater management Spill kits will be provided at the batch plants, storage areas and main work sites and a protocol will be developed and implemented to respond to and remedy leaks or spills. 	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
SW_13	The flood model for the project would be updated with regard to flood modelling undertaken for the South Creek Sector Review (anticipated to be released in 2020).	The flood model for the project will be prepared by Sydney Metro. CPBG will provide Sydney Metro with any information or	Design Manager	Flood modelling	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	The updated flood modelling would be used to inform design development.	documentation it requires to comply with this requirement.			
SW_14	Flood compatible design would need to be demonstrated for the permanent spoil placement areas to ensure compliance with applicable land use criteria and address erosion and sediment risks to ECZ; leaching to underlying soil and/or groundwater.	The SBT Works will be designed and constructed with the objective of not exceeding the flood impact criteria detailed in this requirement (Soil and Water Management Sub-Plan, Section 7.10).	Design manager	Flood reports Flood models Geographic information system outputs	Construction
SW_15	Weather forecast and monitoring is to be undertaken daily as part of the pre-start meeting and the day's activities are to be modified if and as required.	Weather monitoring will be conducted daily using rainfall gauges at CPBG compounds, as well as data from the Badgerys Creek weather station, accessed via the Bureau of Meteorology website (http://www.bom.gov.au).	Environmental Coordinator Site Supervisors	Monitoring reports	Construction
SW_16	In the event that rain forecast is likely to exceed 20mm in any 24-hour period, work activities are to be re-assessed and if deemed necessary (i.e., in the event of prolonged rainfall and actual or potential for rising creek levels), any plant and machinery (and moveable items) are to be relocated to an area outside of the 100-year ARI area (refer to Section 6.3.2) and away from any watercourse.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
SW_17	Where possible, temporary stockpiles and plant and equipment storage are to remain outside of the area identified as being within	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	the 100-year ARI (refer to Figure 6). If required, a flood marker is to be installed on site to indicate the 100-year ARI extent.		Environmental Coordinators		
SW_18	If flooding occurs on the site, the WSA Emergency Plan and/or Contractor Emergency Plan is to be implemented.	CPBG will implement the requirements of the Emergency Plan in the event of a flood.	Project Manager	Emergency Plan	Construction
SW_19	Provide flood-proofing to excavations at risk of flooding during construction, where reasonable and feasible, such as raised entry into shafts and/or pump-out facilities to minimise ingress of floodwaters into shafts and the dive structure	Flood-proofing of excavations at risk of flooding will be investigated as part of detailed design.	Design Manager	Design drawings	Construction
SW_20	The treated water irrigation scheme will be designed and operated in accordance with the risk framework and management principles contained in the National Guidelines on Water Recycling (EPHC 2006) and Environmental guidelines: Use of effluent by irrigation (DEC 2004).	Water treatment plants will be designed according to ANZECC/ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines and adhere to the SM Water Treatment Plant Operational Management Plan.	Project Manager	Monitoring records	Construction
SW_21	<p>An unexpected finds procedure would be developed and implemented as part of the project Soil and Water Management Plan, outlining a set of potential contamination issues which could be encountered, and detailing the corrective actions to be implemented.</p> <p>The unexpected finds procedure would include a process for chemical and asbestos contamination and would generally include:</p> <ul style="list-style-type: none"> Cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands consultant (verification by a certified contaminated land practitioner) 	CPBG will implement the Sydney Metro Unexpected Contamination Find Protocol (SMWSA Soil and Water CEMP, Appendix C) in response to unexpected contamination.	Environment Manager Environmental Coordinators Site Supervisors	Contamination reports	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Collection of soil samples for chemical or asbestos analysis based on observations Assessment of results against applicable land use or waste classification criteria in accordance with NSW Environment Protection Authority statutory guidelines management of the contamination in accordance with NSW Environment Protection Authority statutory guidelines The unexpected finds procedure for on-airport construction would be consistent with the Western Sydney Airport unexpected finds procedure detailed in the Soil and Water Construction Environmental Management Plan (Western Sydney Airport, 2019g). 				
SW_22	<p>Prior to ground disturbance in areas of potential acid sulfate soil occurrence, testing would be carried out to determine the actual presence of acid sulfate soils.</p> <p>If acid sulfate soils are encountered, they would be managed in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998).</p>	<p>Soil investigations will be undertaken prior to construction in areas of potential acid sulfate soil occurrence to determine the actual presence of acid sulfate soils. Acid sulfate soils will be managed in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998).</p>	<p>Environment Manager</p> <p>Environmental Coordinator</p>	PASS testing reports	Prior to construction
SW_23	<p>Prior to ground disturbance in high probability salinity areas testing would be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils would not be reused or would be managed in accordance with Book 4 Dryland Salinity: Productive Use of Saline Land and Water (NSW DECC 2008). Erosion controls would be implemented in accordance with the Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004)</p>	<p>Soil investigations will be undertaken prior to ground disturbance in high probability salinity areas to determine the presence of saline soils. If salinity is found the material would be</p>	<p>Environment Manager</p> <p>Environmental Coordinator</p>	Salinity testing reports	Prior to construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		managed in accordance with relevant guidelines.			
SW_24	<p>All dewatering activities off-site must be undertaken in accordance with the WSA Dewatering Permit to Dewater and be approved by WSA. Where this release of water occurs across package boundaries coordination with applicable interface Contractors and WSA must occur.</p> <p>During and following significant rain events, the following actions must be undertaken:</p> <ul style="list-style-type: none"> Facilitate and participate in regular and event specific inter package planning meetings, including significant rain event look ahead Conduct pre event inspections to ensure maximum basin capacity and effective ERSED controls prior to pending potential rain events Coordinate water management controls during significant events to ensure safe worksites and mitigate potential flooding impacts Post event water quality testing of surface water prior to submission of Permits to Dewater to WSA for approval. <p>WSA will facilitate post event water management meetings to agree on water release strategies within and between packages. Construction water quality discharge criteria are provided in Annexure C.</p>	Dewatering activities will be undertaken in accordance with the WSA Dewatering Permit.	<p>Project Manager</p> <p>Environment Manager</p> <p>Environmental Coordinator</p>	WSA Dewatering Permit	Construction
SW_25	All excavation works are to include the unexpected finds protocol requirements as part of the excavation permit process.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	<p>Site Supervisors</p> <p>Environmental Coordinators</p>	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
SW_26	Implement management measures to minimise surface and groundwater impacts, including identification of water treatment measures and discharge points, details of how spoil and fill material required by the project will be sourced, handled, stockpiled, reused and managed; erosion and sediment control measures; salinity control measures and the consideration of flood events.	Controls to minimise surface and groundwater impacts will be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
SW_27	The release of water across Site boundaries in coordination with applicable Project Contractors as per the Master Interface Principles Deed Poll.	Dewatering activities will be undertaken in accordance with the WSA Dewatering Permit.	Project Manager Environment Manager Environmental Coordinator	WSA Dewatering Permit	Construction
SW_28	Environmental Work Method Statements (EWMS) must be prepared for all high-risk construction activities (including dewatering and sampling methodology). EWMS must be approved by Sydney Metro and WSA Co prior to implementation.	EWMS will be prepared for all high-risk construction activities (including dewatering and sampling methodology).	Environment Manager Environmental Coordinators Site Supervisors	EWMS	Construction
Traffic and Access					
TA_01	As part of the Community communications strategy a community awareness programme will be implemented prior to Construction Works commencing and would continue throughout the entire construction period. The programme will aim to make road users (including local residents) aware of construction traffic and safety issues, such as diversions, temporary road closures, traffic signalling and speed limits	Relevant requirements are detailed in the CPBG Community Communication Strategy (SMWSASBT-CPG-1NL-NL000-CY-PLN-000002).	Stakeholder and Community Engagement Manager	Community notifications	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
TA_02	Management for the temporary and permanent closures of roads within the Airport Site.	Requirement to be addressed in site-specific Construction Traffic Management Plans (CTMPs).	Traffic Manager	CTMPs	Construction
TA_03	Ongoing consultation with TfNSW and local councils as appropriate and emergency services.	Consultation with relevant stakeholders will be undertaken through the Traffic and Transport Liaison Group (TTLG).	Traffic Manager	TTLG meeting records	Construction
TA_04	Induction for drivers working on the project to cover safety measures particularly for night works.	Safety measures for night works will be included in the induction/toolbox talks.	Environment Manager Site Supervisors	Induction and toolbox records	Construction
TA_05	Review of speed environments along transport corridors.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager	CTMPs	Construction
TA_06	Restriction of construction related traffic within the AM and PM peak periods where required.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_07	Management of the transportation of construction materials to optimise vehicle loads in order to minimise vehicle movements.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_08	Traffic control measures to manage and regulate traffic movements during construction.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_09	Identification of potential disruption to road users.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager	CTMPs	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
			Site Supervisor		
TA_10	Identification of any road closures and/or road upgrades that may be required.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_11	Construction vehicle routes, including the use of arterial roads, haulage routes, access to the Airport Site and procedures for oversize and heavy vehicles.	Construction vehicle routes are detailed in the SMWSA Traffic and Access CEMP and will be addressed by CPBG in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_12	For all scopes of work, construction plant, machinery and vehicle parking areas will be located as far as practicable from sensitive receivers. Parking locations will be identified on ECMs and shown on Vehicle Movement Plans as applicable.	Requirement to be addressed in site-specific CTMPs and ECMs.	Traffic Manager Environmental Coordinators Site Supervisor	CTMPs ECMs	Construction
TA_13	Measures to support and encourage sustainable travel for construction workers to and from the Airport Site, including public transport, shuttle buses, cycling, walking, and car-sharing (as also outlined in the Air Quality CEMP).	CPBG will implement the sustainable travel requirements detailed in the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001).	Sustainability Manager	Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001)	Construction
TA_14	Access to the site will be controlled to protect the general public from exposure to the inherent hazards of a construction site. Security guards stationed at the main entry point to the site will provide access control and ensure that all those entering the site are wearing the appropriate personal protective equipment (PPE).	This requirement will be reflected in the Construction Area Plans.	Project Manager Site Supervisors	Construction Area Plans	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
TA_15	Property access affected by the construction works will be maintained or alternative arrangements made in consultation with the affected landowners.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor Stakeholder and Community Engagement Manager	CTMPs Consultation records	Construction
TA_16	Adopt the general road user delay prevention strategies in the preparation of CTMPs (refer to Section 8.7 of the SMWSA Traffic and Access CEMP).	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_17	The construction haulage routes for access and egress from the site are presented in Section 8.8.1 of the SMWSA Traffic and Access CEMP. Ensure haulage routes are reflected in relevant CTMPs and the site induction.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs Induction and toolbox records	Construction
TA_18	Access to the project will be via the existing local road network. The local roads used for access to the project site are Badgerys Creek Road, Elizabeth Drive, The Northern Road and Anton Road. These access arrangements are subject to change in response to the works, to reduce any potential impacts to the road network and maintain safety.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction
TA_19	The access arrangement for the SM - WSA Material Importation phase will utilise Elizabeth Drive as the main arterial road followed by the Badgerys Creek – Longleys Road roundabout and new internal roads linking the Pre-fabrication yards, Spoil placement area and the station sites. This entry and exit point is left in – left out only. The Material Importation access arrangement is shown in Figure 8.2 of the SMWSA Traffic and Access CEMP.	Requirement to be addressed in site-specific CTMPs.	Traffic Manager Site Supervisor	CTMPs	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
TA_20	All Traffic Control Plans must be designed in alignment with the CTMF and prepared in accordance with the Procedures for Use in the preparation of a Traffic Management Plan (RTA 2001) and Section 8.11.1 of the SMWSA Traffic and Access CEMP.	Site-specific CTMPs will be prepared in accordance with the CTMF, Procedures for Use in the preparation of a Traffic Management Plan (RTA 2001), and Section 8.11.1 of the SMWSA Traffic and Access CEMP.	Traffic Manager	CTMPs	Construction
TA_21	All Vehicle Movement Plans and Traffic Staging Plans must be designed in alignment with the CTMF and the SMWSA Traffic and Access CEMP (Section 8.11.2 and Section 8.11.3).	Requirement to be addressed in Vehicle Movement Plans and Traffic Staging Plans.	Traffic Manager	Vehicle Movement Plans Traffic Staging Plans	Construction
TA_22	All aspects of traffic management will be coordinated by the "Western Sydney Transport and Roads Hub" which is a unit that has been created by Transport for New South Wales (TfNSW) to address coordination of transport and road issues in the Western Sydney area with particular regard to the immediate vicinity of the Airport Site. TTLG meetings will be coordinated by the Hub.	Consultation with relevant stakeholders will be undertaken through the TTLG which will be coordinated by the Western Sydney Transport and Roads Hub.	Traffic Manager	TTLG meeting records	Construction
TA_23	An independent Road Safety Audit must be undertaken to assess the safety performance of new or modified local road, parking, pedestrian and cycle infrastructure to ensure that they meet the requirements of relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Management. The audit must be undertaken by an appropriately qualified (currently registered on the NSW Register of Road Safety Auditors) and experienced person during detailed design development and traffic management plans (audit of plans), and prior to opening (pre-opening audit). The audit findings and recommendations of the detailed design plans and traffic management plans (audit of the plans) must be actioned	Road Safety Audits will be prepared in accordance with the CEMP and this requirement.	Traffic Manager	Road Safety Audits	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	prior to construction of the relevant infrastructure. The pre-opening audit findings and recommendations must be actioned prior to the relevant infrastructure being made available for use.				
Visual Amenity and Landscape					
VL_01	Site context analysis to inform the early stages of detailed design.	This requirement will be incorporated into the detailed design.	Design Manager	Design drawings	Construction
VL_02	Corridor services, including the combined services route, to be designed to reduce visual clutter and minimise visual impact.	This requirement will be incorporated into the detailed design.	Design Manager	Design drawings	Construction
VL_03	Proposed engineering batters and water management measures would be designed to integrate with the existing landforms and natural features.	This requirement will be incorporated into the detailed design.	Design Manager	Design drawings	Construction
VL_04	Large grade cut and fill transitions will be avoided where practicable, particularly near the Airport Site boundary.	This requirement will be incorporated into the detailed design.	Design Manager	Design drawings	Construction
VL_05	Construction plant, machinery and vehicle parking areas will be located as far as practicable from sensitive receptors.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
VL_06	Any night lighting required for construction works will be located as far as practicable from sensitive receptors with appropriate screening as required.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
VL_07	Earthworks and construction of other infrastructure, earthworks areas will be rehabilitated where it is practical to do so.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
VL_08	Retaining existing vegetation on the edges of the construction impact zone where practicable and outside of the construction impact zone to provide visual screening.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
VL_09	Existing trees to be retained would be protected prior to the commencement of construction in the vicinity of these trees in accordance with AS4970-2009 Protection of Trees on Development Sites.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
VL_10	Maintenance of outward facing elements of site hoarding or noise barriers, including the removal of graffiti and weeds.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
VL_11	Construction sites and compounds to be designed with consideration to the principles of Crime Prevention Through Environmental Design (CPTED) including: <ul style="list-style-type: none"> • Surveillance • Access control • Territorial reinforcement • Space management. 	This requirement will be incorporated into the detailed design.	Design Manager	Design drawings	Construction
Waste and Resources					



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
WR_01	The NSW Government's Waste Management Hierarchy of "avoid-reduce-reuse- recycle- dispose" will be followed as the framework of waste management throughout the Project.	Requirements of the Waste Management Hierarchy will be included in ECMs, the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001) and reinforced through the induction/toolbox talks.	Environment Manager Sustainability Manager Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	Construction
WR_02	A procurement strategy will be implemented that will demonstrate value for money and that it has considered opportunities to procure goods and services: <ul style="list-style-type: none"> From local suppliers That are energy efficient or have low embodied energy That minimise the generation of waste That make use of recycled materials. 	CPBG will implement the procurement strategy detailed in the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001).	Sustainability Manager	Tender assessment and documentation	Construction
WR_03	Waste management measures will be included in relevant EWMS/ECMs to be developed prior to the commencement of specific activities. This would include: <ul style="list-style-type: none"> Reuse of excavated road materials would be maximised as far as possible where they are cost, quality and performance competitive to reduce use of materials (with embedded energy). Assess opportunities to use local materials to reduce transport emissions 	Control to be included in ECMs and EWMSs and reinforced through the induction/toolbox talks.	Environment Manager Environmental Coordinators Site Supervisors	ECM EWMS Induction and toolbox records	Construction
WR_04	The following measures will be implemented to avoid and reduce waste: <ul style="list-style-type: none"> Efficient utilisation of resources to reduce consumption Optimisation of detailed designs to avoid unnecessary resource consumption 	Controls to be included in ECMs, the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001) and reinforced	Environment Manager Sustainability Manager	Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001)	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
	<ul style="list-style-type: none"> Implementation of high efficiency water systems to reduce water consumption Procurement policies that preference recyclable, minimal and/or returnable packaging Procurement of materials in bulk, where practicable, to minimise packaging waste. 	through the induction/toolbox talks.	Environmental Coordinators Site Supervisors	ECM Induction and toolbox records	
WR_05	<p>All waste that cannot be re-used or recycled onsite will be classified and disposed of in accordance with the Waste Classification Guidelines Parts 1 and 2 (EPA, 2014) and Appendix A of the SMWSA Waste and Resource CEMP.</p> <p>Excavated material that is not suitable for on-site reuse or recycling will be transported to a site that may legally accept that material for reuse or disposal.</p> <p>Soils leaving the site will be waste classified so that correct resource recovery and or off-site disposal occur.</p>	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Environment Manager Environmental Coordinators Site Supervisors	Waste classification records Waste tracking and disposal records ECMs	Construction
WR_06	<p>Cleared vegetation will be reused or recycled to the greatest extent practicable for example:</p> <ul style="list-style-type: none"> Mulching of vegetation for use in landscaping Spreading of vegetation for fauna habitat in suitable areas where agreements are made for this (e.g. mulch, small timber, hollow logs) Donation of other timber to community or environmental groups. 	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
WR_07	Weeds will be managed, handled and disposed of in accordance with the Weed Management Plan (refer to the SMWSA Biodiversity CEMP). If disposal is appropriate, the weed material will be transferred to a licensed waste facility.	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
WR_08	Concrete, asphalt, bricks/masonry and steel products are to be reused on site where possible. Alternatively, they will be sent off-site for recycling.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
WR_09	Sediment recovered from erosion and sediment control devices will be reused on site as general fill material or it will be incorporated within landscaping materials where possible.	Control to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
WR_10	All staff and subcontractors will undergo a site induction and ongoing toolbox talks that will detail waste minimisation and reuse management measures, including the requirements of the waste management hierarchy. Waste minimisation training will include energy consumption awareness that promotes energy conservation methods including minimising energy use by switching off equipment when not in use.	CPBG will deliver induction and toolbox training in accordance with Element 1 of this Plan. In addition, all staff, workers and visitors are required to undertake the WSA Project induction before attending site.	Environment Manager Environmental Coordinators	Induction and toolbox records	Construction
WR_11	Contaminated land management must be undertaken in accordance with the SMWSA Soil and Water CEMP and the applicable Remediation Action Plan.	CPBG will implement the requirements of Remedial Action Plan.	Environment Manager	Remedial Action Plans Site Audit Statements	Construction
WR_12	An emergency spill response procedure will be prepared to minimise the impact of any accidental spills, and include details on the requirements for managing spills, disposing of any contaminated waste, and reporting of any such incidents. Any waste generated as a result of a spill and associated clean-up which requires off-site disposal, will be done so in accordance with the NSW EPA Waste Classification Guidelines (2014).	CPBG will implement the Spill Management Procedure (SMWSASBT-CPG-SWD-SW000-CT-PRO-000002) in the event of a leak or spill.	Environmental Coordinators Site Supervisor	Incident reports	Pre-construction Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
WR_13	Hazardous wastes special wastes that require disposal off-site during construction will be managed consistently with the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> (NSW).	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction
WR_14	Measures to reuse and recycle waste will be implemented including: <ul style="list-style-type: none"> Reuse of green waste and topsoil for landscaping Reuse of excess or contaminated soils where they have been demonstrated to be suitable for re-use in accordance with RAP or other relevant guidance Reuse of waste streams including metals, oils and solvents wherever possible Recycling of waste streams including brickwork, metals, plasterboard, plastics and timber Contract terms with suppliers to specify recyclable content and returnable packaging Co-operation in stewardship programmes for compatible waste streams including pallets Where soil/ spoils required disposal to a licensed facility, that all measures have been undertaken to achieve the lowest waste classification in accordance with the NSW EPA 2014 Waste Classification Guidelines Raw materials (such as noise hoarding and site fencing) will be reused or shared, between sites and between construction contractors where feasible and reasonable. 	Waste streams will be recycled and the percentage recycled will be reported monthly. Controls to be included in ECMs, the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001) and reinforced through the induction/toolbox talks.	Environment Manager Sustainability Manager Environmental Coordinators Site Supervisors	Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001) ECM Induction and toolbox records	Construction
WR_15	Measures to recover and treat waste will include recovery (prior to reuse) of compatible waste including metals, oils, solvents, brickwork, metals, plasterboard, plastics and timber.	Metals, bricks, concrete, plasterboard, plastics and timber will be recycled and reported. Oils and solvents will be managed as per hazardous waste protocols.	Site Supervisors Environmental Coordinators	ECM Induction and toolbox records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		Controls (as per Section 6.2.3 of the SMWSA Waste and Resource CEMP) to be included in ECMs and reinforced through the induction/toolbox talks.			
WR_16	<p>A central waste area (or areas) will be established during construction, at which waste (including recyclables) would be stored. Most construction waste will be stored in covered co-mingled bins for processing offsite to maximise resource recovery. Office waste will be segregated to maximise resource recovery.</p> <p>Spoil, topsoil and mulch are to be stockpiled onsite in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented as per this Plan.</p> <p>Residual waste that cannot be avoided, reduced, reused, recycled, recovered or treated will be collected by a licensed contractor for disposal at a licensed facility.</p>	Waste storage areas will be established for each worksite and reflected on ECMs.	<p>Project Manager</p> <p>Site Supervisor</p>	ECM	Construction
WR_17	A Waste Management Register of all waste collected for disposal and/or recycling will be maintained on a monthly basis until final completion.	A Waste Management Register will be maintained for the duration of the SBT Works.	<p>Project Manager</p> <p>Site Supervisor</p>	Waste Management Register	Construction
WR_18	Waste will be managed and disposed of in accordance with the POEO Act and the NSW Waste Classification Guidelines (EPA, 2014). Wastes that are unable to be reused or recycled will be disposed of offsite at a licensed waste management facility, following classification.	Controls to be included in ECMs and reinforced through the induction/toolbox talks.	<p>Environment Manager</p> <p>Environmental Coordinators</p> <p>Site Supervisors</p>	<p>Waste classification records</p> <p>Waste tracking and disposal records</p>	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
WR_19	<p>Oils and other hazardous liquids will be labelled and stored in a sealed container within a bunded area. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume for bulk storage or 120 per cent of the volume of the largest container for smaller packaged storage.</p> <p>Material collected from within bunded areas will be disposed off-site at a waste facility approved by the EPA. Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the Environmentally Hazardous Chemicals Act 1985 and the EPA waste disposal guidelines</p>	All relevant worksites will provide a bunded hazardous material storage container will be used on the Project and inspected weekly.	Site Supervisors Environmental Coordinators	ECM	Construction
WR_20	The relevant licenses of waste facilities utilised for the disposal of Project waste will be obtained (on a regular basis if necessary) to ensure they are legally able to accept that waste.	All waste facilities will be vetted to ensure the waste they are receiving from the Project is permissible. Facilities outside of NSW are not to be used unless WSA has provided approval.	Environment Manager Environmental Coordinators	Waste disposal facility register	Construction
WR_21	The disposal of chemical, fuel and lubricant containers, solid and liquid wastes must be in accordance with the requirements of the local Council or the NSW EPA.	Hazardous materials and containers will be stored onsite until disposed of by a licensed contractor.	Site Supervisors Environmental Coordinators	ECM Waste tracking and disposal records	Construction
WR_22	All trucks transporting wastes off site will be appropriately licensed to carry the materials to appropriately licensed waste facilities.	All waste transporters will be vetted to ensure they are appropriately licenced	Procurement Manager	Procurement records	Construction
WR_23	An illegal dumping prevention strategy will be implemented and will be developed in consultation with the NSW EPA and relevant local councils. The strategy will outline measures to be undertaken to minimise the risk of illegal dumping on the Airport Site.	CPBG will implement the requirements of the Illegal Dumping Prevention Strategy (refer to Section C4 of	Environment Manager Environmental Coordinators	ECMs Awareness initiatives Site security, signage, lighting,	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
		Appendix C of the SMWSA Waste and Resource CEMP)	Project Manager	surveillance and barriers Waste tracking and disposal records	
WR_24	In the event that WSA are unable to achieve the targets set out in Section 3.2 of the SMWSA Waste and Resource CMEP with regards to reuse and recycling and therefore off-site waste disposal is required, consultation is to be undertaken with the relevant waste management providers to ensure they are capable of handling any significant waste streams and also to confirm that our waste management practices do not place unnecessary burden on local and regional waste services.	Monthly reporting will be undertaken in accordance with Element 2. If recycling targets are not being met, and additional landfill disposal is required, consultation will be undertaken with the relevant waste management facilities.	Environment Manager Environmental Coordinators	Waste tracking and disposal records	Construction
WR_25	The Sustainability Plan will help to ensure that construction resources are used efficiently, and waste is minimised.	CPBG will undertake all SBT Works in accordance with the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001).	Sustainability Manager	Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001)	Construction
WR_26	Energy efficient work practices will be implemented, including the consideration of: <ul style="list-style-type: none"> Energy efficient design of site buildings Design of construction work sites to minimise unnecessary vehicle movement Assess energy (fuel/electricity) efficiency when selecting equipment Regular servicing of site plant and equipment Training of personnel in energy efficient best practices Use of locally sourced material where available and of suitable quality. 	Energy efficient work practices are detailed in the Sustainability Management Plan (SMWSASBT-CPG-1NL-EV-PLN-000001). Implementation will be achieved through the design process, induction and training and regular monitoring.	Sustainability Manager	Induction and training records Design drawings Monitoring records	Construction



Ref	Requirement	How will CPBG meet the Requirement?	Responsibility	Deliverables	Timing
WR_27	All materials to be imported onto the Site must satisfy the requirements of the Remediation Action Plan and Section 6.7 of the SMWSA Waste and Resource CEMP.	Ensure that the appropriate certification documentation has been provided to WSA environment team, prior to the importation of material/s onto the Site.	Project Manager Environment Manager Site Supervisor	Certification documentation	Construction
WR_28	Track and record the type, amount and location of material/waste imported, reused, recycled, stockpiled, and disposed of (including for Temporary Works). Where suitable material is received by Sydney Metro or the contractor for beneficial reuse on the Project, prior to importing the materials to the site the supplier must provide information on the material that concentrations of potential contaminants are below relevant NEPM criteria or an applicable EPA waste or resource recovery orders/exemption and a notice under Section 143 of the POEO Act to transport the waste received	Maintain an imported material tracking register and a waste material tracking register for the duration of the SBT Works.	Project Manager Environment Manager Site Supervisor	Imported material tracking register	Construction
WR_29	Reuse of spoil within Western Sydney International would be undertaken in accordance with the Airport Plan, Construction (Rail) Plan and any relevant CEMPs, including any subsequent variations to those plans. Where spoil cannot be reused for the project, or the Western Sydney International spoil placement areas, opportunities to reuse spoil on other projects would be identified.	Reuse of suitable spoil will be prioritised by CPBG in consultation with Sydney Metro and WSA Co.	Project Manager	Material tracking register	Construction



Annexure A Site Condition Monitoring Protocol

Position	Normal	Trigger Level 1 (T1)	Trigger Level 2 (T2)	Trigger Level 3 (T3)
Trigger Description	<p>Wind – Light to gentle breeze (20km/h). Not impacting working @ heights or lifting activities</p> <p>Rain – No rain forecasted. No recent flooding impacting works.</p> <p>Lightning – No lightning or signs of lightning within area</p> <p>Bushfire – No bushfire</p> <p>Fire Danger Ratings – Low to High</p>	<p>Wind – Strong wind with wind gusts up to 45 km/h/ 12.5m/s creating a risk that is not controlled with existing measures</p> <p>Rain – Light rain fall (50-90% chance 50-100mm) in immediate catchment area with continuing rain forecast</p> <p>Lightning – Lightning activity greater than 30 kilometers away.</p> <p>Other - Weather warning from BOM</p> <p>Bushfire – 30kms-200kms away</p> <p>Fire Danger Ratings – Very High</p>	<p>Level 1 triggers plus</p> <p>Wind – Strong wind to strong gale force winds of 45 km/h to 87 km/h, 13-24 m/s</p> <p>Rain – Forecast significant rain fall (50-90% chance of 100-200mm) in immediate catchment area. Rain / storms forecast in catchment areas.</p> <p>Lightning – Lightning activity 10-30 kilometers away</p> <p>Other - Severe weather warning from BOM</p> <p>Bushfire – Bushfire 5-30kms away</p> <p>Fire Danger Ratings – Severe</p>	<p>Level 2 triggers plus</p> <p>Wind – Storm force winds in excess of 88 km/hr., 25 m/s causing immediate risk</p> <p>Rain – Current/immediate risk of heavy downpour resulting (Greater than 200MM) in localised flooding. Current/immediate risk of waterways flooding. Long term > 4-day loss of site access</p> <p>Lightning – Lightning <5 Kilometers away.</p> <p>Other- Flood warning BOM website</p> <p>Bushfire – Bushfire <5km away</p> <p>Fire Danger Ratings – Catastrophic</p>
Site works	Operate as normal	<p>Check crane operation limits and cease works if required</p> <p>Ensure ERS&D measures are in place to manage dirty water</p> <p>Operate as normal ensure measures are in place to control fire if it occurs</p>	<p>Check crane operation limits and cease works if required</p> <p>Ensure ERS&D measures are in place to manage dirty water</p> <p>Allow Hot Works if strictly necessary</p>	<p>Cease crane operation</p> <p>Ensure ERS&D measures are in place to manage dirty water</p> <p>Cease all Hot Works</p>
Project Manager	No variation from standard project managerial activities	Communicate status to all Section Managers.	<p>Communicate status to with relevant staff (function support managers).</p> <p>Consider mobilisation of ECO</p> <p>Communicate status to EPC</p>	<p>Communicate status to senior Managers</p> <p>Conduct Planning session with relevant staff (function support managers)</p>



Position	Normal	Trigger Level 1 (T1)	Trigger Level 2 (T2)	Trigger Level 3 (T3)
Superintendent/ Emergency Controller	No variation from standard supervisionactivities	Communicate status to subcontractors Ensure new environmental conditions are assessed by contractors and Identifytemporary works at risk in event of escalation Communicate status to Project Manager	Communicate status to Project leader Communicate with subcontractors anddevelop action plan. Ensure sub-contractors and emergencymanagement plans are ready to be activated. Monitor progress. Communicate status to Project Manager	Communicate status to Project Manager Ensure Project emergency managementplans are activated Monitor progress of action plan Communicate status to Project Manager
Environmental Staff	No variation from standard managementactivities	Monitor and communicate information relating to inclement weather to ProjectManager	Monitor and communicate information relating to inclement weather to ProjectManager Provide advice on environmental preparation Conduct inspections as required	Monitor and communicate information relating to inclement weather to ProjectManager Provide advice on environmental preparation Conduct inspections as required



Annexure B Sydney Metro WSA Out of Hours Works Permit Form

Document Control Number:		
Permit Number:		
Package/ Project:		
Contractor:		
Title/Activity:		
Licence Area:		
Application Date:		
Person Requesting the work:		
Justification why OOHW required:		
Supervisor details:		
Out of Hours Works Assessment		
Item	Description	Information/Comments
1.	Proposed dates/duration:	
2.	Start time:	
3.	Finish time:	
4.	Description of the works (include SWMS/work package ref):	
5	Details on any concurrent construction activities being undertaken adjacent/ in close proximity to the proposed works:	
6.	Provide construction activities undertaken by other Package Contractors in close proximity to the proposed works	
7.	Provide measures put in place to capture potential <u>cumulative impact from concurrent activities</u> (proposed works and other current works including deliveries to site)	
8.	Plant and equipment to be used:	Complete Table 1



	(List all plant and noise generating equipment to be used during the work activities) e.g., hand tools, generators, crane etc	
	Have alternative options been considered and assessed, e.g., quieter/less vibration intensive equipment, for the activity? If yes, why are these not being used?	Yes <input type="checkbox"/> No <input type="checkbox"/>
9.	Names of Foreman supervising the work:	
10.	Location of Work: Attach a map of the work area (Figure 1)	
	Distance to Nearest Residential Receiver:	
11.	Will the work require traffic control or impact on local public roads (y/n) If yes, consider this in the noise assessment and notification, along with details other any other OOH traffic controls	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Include the location of traffic impact on map	
12.	Will lighting be required for the work? (y/n) Angle lighting away from receivers	Yes <input type="checkbox"/> No <input type="checkbox"/>

Noise and Vibration Assessment		
<p>Complete Table 1 to describe the activities and include the predicted noise levels. Contractor should consider the cumulative noise impacts from other works contractors and activities. Include noise modelling report as an attachment.</p>		
13.	Noise Management Level (NML):	
	Sleep disturbance level (night only):	
	Overall Predicted noise (Leq / LA10):	
14.	Acoustic assessment prepared to determine if works are above Project NML at closest receiver ¹	<input type="checkbox"/> Category A: no exceedance of NML <input type="checkbox"/> Category B: 1 –5 above NML <input type="checkbox"/> Category C: 6 – 15 above NML



		<input type="checkbox"/> Category D: 16 – 25 above NML <input type="checkbox"/> Category E: >25 above NML		
15.	Will the proposed works (including cumulative impacts) have impact on wildlife?	<input type="checkbox"/> Yes <input type="checkbox"/> No Details:		
16.	What measures are being taken to reduce noise impacts? Are respite periods required for the scope of work? Complete Table 2 – where a mitigation measure is not implemented, justification must be provided			
17.	Details of planned attended noise monitoring (location, time etc) ² (NB: min of two monitoring events required)			
18.	Are vibration impacts expected/is vibration monitoring required? ³	<input type="checkbox"/> Yes <input type="checkbox"/> No		
19.	Has the community or concerned residents been notified? (Community notification required for all works for Category B – E) Attach communications with Comms team confirming outcome	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Category D and E Works				
20.	Address(es) of the affected residential receivers and their associated RBL	Address	RBL	NML

Notes:

¹ Output of noise prediction model or consultant report to be provided with permit application / attached

² Noise monitoring will be undertaken at the nearest affected residential receiver.

³ Vibration monitoring will be undertaken at the nearest affected residential receiver.



Table 1 Details of nature and scope of work

Activity No.	Program Activities	Location (e.g. Chainage)	Date & Time	Vehicles, Plant & Equipment Required	Predicted noise level	Sleep Screening (Y/N)	Justification
1							
2							



Mitigation Measure	Exceedances of relevant NML dB(A)									
	Category A		Category B		Category C		Category D		Category E	
	Required	Implemented	Required	Implemented	Required	Implemented	Required	Implemented	Required	Implemented
Programming / schedule of works	X		X		X		X		X	
Alternative construction techniques/scheduling			X		X		X		X	
Alternative plant and equipment			X		X		X		X	
Community consultation (i.e. letter box drops, etc)			X		X		X		X	
Use of temporary noise screens					X		X		X	
Provision for respite for high noise generating activities					X*		X		X	
Face to face consultation					X*		X		X	
Respite offer / act of good will									X	
Reasonable temporary relocation offers where agreeable									X	
Negotiated agreement									X	

* Category C may include sleep disturbance exceedances. In these instances, face to face consultation and respite provisions must be considered.





Figure 1: Map illustrating location of works, affected sensitive receivers and notification area



APPLICANT DETAILS	
<p>I certify that the details provided in this application are true and accurate for the work to be performed.</p> <p>NAME:</p> <p>POSITION:</p> <p>SIGNATURE:..... DATE:</p>	
APPROVALS	
WSA Environment Manager or delegate	<p>NAME:</p> <p>SIGNATURE:..... DATE:</p>
DP Environment Manager or delegate	<p>NAME:</p> <p>SIGNATURE:..... DATE:</p>
WSA Community Manager	<p>Consultation requirements:</p> <p>NAME:</p> <p>SIGNATURE:..... DATE:</p>
Conditions of Approval	<p>Attended monitoring YES/NO</p> <p>FREQUENCY</p> <p>DURATION</p> <p>OTHER:</p>



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Hard copy to be maintained by foreman on site during works

Pre- start checks (at start of first shift)		
1.	Briefing of OOHW requirements given to site team	
2.	Monitoring in place	
3.	Mitigation measures in place	



Annexure C Construction water quality discharge criteria

Parameter	Criteria	Sampling method	Analytical method
Receiving water within the Airport Site (AEPR)			
pH	6.5-9.0	Probe of Grab Sample	Field analysis and confirmed as required with laboratory assessment
Total suspended solids (TSS)	Not more than 10% from the existing level in the receiver water	Grab sample	Field analysis and confirmed as required with laboratory assessment
DO (%sat)	80% of level in the receiving water or> 6mg/L	Grab Sample (Probe)	Field analysis and confirmed as required with laboratory assessment
DO (mg/L)		Grab Sample (probe)	Field analysis and confirmed as required with laboratory assessment
Receiving water outside the Airport Site (ANZECC)			
Oil and Grease	No visible	Visual assessment for oil sheen	Field analysis and confirmed as required with laboratory assessment
pH	6.5-9.0	Probe of Grab Sample	Field analysis and confirmed as required with laboratory assessment
Turbidity *	6-50 NTU	Probe of Grab Sample	Field analysis and confirmed as required with laboratory assessment
DO (%sat)	>80%	Grab Sample (Probe)	Field analysis and confirmed as required with laboratory assessment
DO (mg/L)	>6	Grab Sample (probe)	Field analysis and confirmed as required with laboratory assessment
Oil and Grease	No visible	Visual assessment for oil sheen	Field analysis and confirmed as required with laboratory assessment



Annexure B Aquatic Ecological Assessments

SYDNEY METRO WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS - BASELINE AQUATIC ECOLOGY SURVEY



**Report Prepared for
AMBS Pty Ltd**

10 November 2022

AQUATIC ECOLOGICAL INVESTIGATIONS

(Mobile)

(Email)

Document Information

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	4
1.3	Previous Surveys	4
2.0	METHODS.....	6
2.1	Survey Overview	6
2.2	Field Methods.....	8
2.2.1	Aquatic Habitat Assessment.....	8
2.2.2	Surface Water Quality	8
2.2.3	Aquatic Macroinvertebrates	9
2.2.4	Fish	9
2.2.5	Data Analysis	9
2.2.6	Quality Assurance/Quality Control (QA/QC).....	10
3.0	RESULTS.....	11
3.1	Survey Dates and Rainfall.....	11
3.1	Aquatic Habitat Characteristics.....	12
3.2	Water Quality	16
3.3	Aquatic Macroinvertebrates	17
3.4	Fish	19
4.0	DISCUSSION	20
4.1	Aquatic Habitat	20
4.2	Water Quality	20
4.3	Aquatic Macroinvertebrates	21
4.4	Fish	22
5.0	CONCLUSIONS.....	22
6.0	REFERENCES.....	23

List of Tables

Table 1. Sites for sampling surface water habitats and biota.	6
Table 2. Mean (+ SE) measurements of water quality variables recorded at each site (16 August 2022). Values in bold are outside the guideline values recommended by ANZECC/ARMCANZ (2000). N/R = not recorded.	17
Table 3. Macroinvertebrate taxa collected using the AUSRIVAS protocol (16 August 2022) and SIGNAL 2 indices.	18
Table 4. Species of fish and crustaceans collected (16 August 2022).	19

1.0 INTRODUCTION

1.1 Background

The Western Sydney Airport Metro (WSA Metro) is a new rail line to the Western Sydney Airport that is currently under construction at Badgerys Creek. The contract to build the WSA Metro Station Boxes and Tunnelling Works (WSA Metro SBT) (the Project) was awarded to the CBP Contractors and Ghella Joint Venture (CPBGJV). Aquatic Ecological Investigations (AEI) was engaged by AMBS Ecology & Heritage Pty Ltd (AMBS), on behalf of CPBGJV, to undertake a survey of aquatic ecology at selected sites within or near the Project area, to inform a discharge impact assessment (DIA).

1.2 Regional Overview

The Western Sydney Airport site is located approximately 50 kilometres (km) west of Sydney. Except for the Airport, existing development in the upper catchment is predominantly low density residential with some medium density, town centres and special infrastructure (for example Oran Park, Austral, North Leppington, Catherine Fields).

The airport site is located in the upper reaches of the catchments of Badgerys, South (or Wianamatta) and Oaky/Cosgrove Creek. Badgerys Creek joins South Creek approximately 4 km downstream of the airport site. Cosgrove Creek subsequently joins South Creek approximately 3 km further downstream. South Creek continues to flow generally north before reaching its confluence with the Hawkesbury River, near Windsor. South Creek has a catchment area of about 625 km².

1.3 Previous Surveys

Aquatic surveys were carried out by GHD (2016) for the WSA in March and May 2015, to assist in fulfilling the Environmental Impact Study (EIS) guidelines issues by the Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Sampling was carried out at 13 sites located upstream and downstream locations on waterways that traverse the airport site, and at two representative farm dams. A general description of habitats including macrophytes and riparian vegetation was made using the NSW Australian Rivers Assessment System (AUSRIVAS) protocols. Water quality was assessed in situ and grab samples were tested for nutrients. Sampling targeted fish and macroinvertebrates.

1.4 Objectives

Flow and surface water quality monitoring is currently undertaken at sites within South Creek, Badgerys Creek, Claremont Creek and Thompson Creek (Figure 1). The objectives of this study include:

- Survey of aquatic macroinvertebrate and fish assemblages paired with *in situ* surface water quality sampling at the established sampling sites.
- An assessment of environmental condition at each site based on a variety of ecological indices.

2.0 METHODS

2.1 Survey Overview

A total of five sites were surveyed for aquatic habitat, macroinvertebrates and fish (Table 1, Figure 1). The aquatic habitat assessment was done using the AUSRIVAS sampling protocol (Turak et al., 2004). Each site (approximately 100 m in length) was photographed and the locations recorded with a hand-held satellite-based Global Positioning System (GPS).

Collections of macroinvertebrates were completed in accordance with Section 37 of the *NSW Fisheries Management Act 1994* using Scientific Collection Permit Number P03/0032(B) and NSW Agriculture, Animal Research Authority Care and Ethics Certificate of Approval Number 03/2445.

Table 1. Sites for sampling surface water habitats and biota.

Creek	Site Code	Easting	Northing	Location
South Creek	SC1	293217	6261563	Near the Kingsway Touch Fields, St Marys
	SC2	292825	6263373	Under the Christie Road bridge, St Marys
Claremont Creek	CC	292347	6261646	Off Gipps Street, Werrington
Thompsons Creek	TC	291592	6244002	Off The Retreat, Bringelly
Badgerys Creek	BC	290812	6246750	Badgerys Creek Road, Badgerys Creek

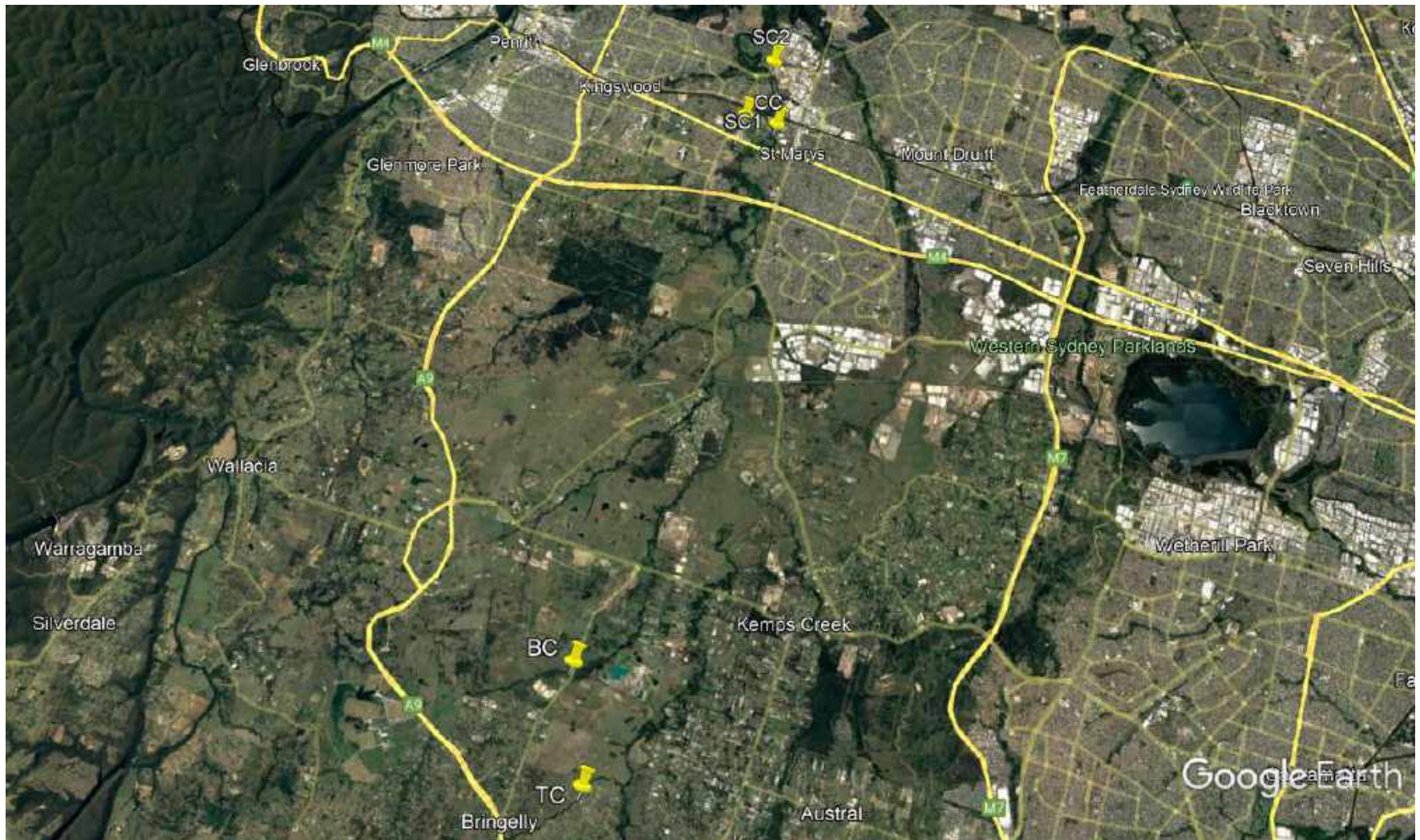


Figure 1. Survey Sites (16/08/2022). Image provided by Google Earth.

2.2 Field Methods

2.2.1 Aquatic Habitat Assessment

The condition of the aquatic habitat was assessed at each of the selected site's using a modified version of the Riparian Channel and Environmental (RCE) inventory method (Chessman et al., 1997).

The RCE method involves evaluation and scoring of the characteristics of the adjacent land, the condition of riverbanks, channel and bed of the watercourse, and degree of disturbance evident at each site. Information was collected on the following features:

- Occurrence of key aquatic habitat (e.g., pools, macrophytes and woody debris)
- Characteristics of the waterway (e.g., flow and stream width)
- Water clarity
- Presence of in-stream and emergent aquatic macrophytes
- Barriers to fish passage
- Presence of algae, exotic plants, bank degradation, flocculent, odour, detergents, oil, rock piles or sedimentation, pipes, rubbish and point sources
- Surrounding land uses.

A photo record, recording upstream and downstream views of each monitoring site, was collected during each monitoring event to provide a record of aquatic habitat present at the time of sampling.

2.2.2 Surface Water Quality

Water quality was measured at each site using a Yeo-Kal 611 probe. Physico-chemical properties measured included electrical conductivity ($\mu\text{S}/\text{cm}$), dissolved oxygen (% saturation and mg/L), pH (pH units), temperature ($^{\circ}\text{C}$), oxygen-reduction potential (mV) and turbidity (NTU). Duplicate readings of each variable will be collected in accordance with Australian Guidelines (ANZECC/ARMCANZ, 2000). Alkalinity (mg/L CaCO_3) was measured by field titration using an appropriate alkalinity kit.

2.2.3 Aquatic Macroinvertebrates

Aquatic macroinvertebrates were sampled using the AUSRIVAS protocol (Turak et al., 2004). Samples of stream edge habitats and riffle habitats (where available) were collected over a total length of 10 m (usually in 1-2 m sections) at each site using a 250 µm dip net. The contents of each net sample were placed into a white sorting tray and animals collected for a minimum period of 30 minutes. Thereafter, removals were done in 10-minute periods, up to a total of one hour (Turak et al., 2004). If no new taxa were found within a 10-minute period, removals ceased (Turak et al., 2004). The animals collected were placed inside a labelled container and preserved with 70 % alcohol. All samples were retained in appropriate containers and preservative to allow further examination later if required.

In the laboratory, samples were examined under a binocular microscope (at 40X magnification) and identified to family level with the exception of Acarina (to order), Chironomidae (to sub-family), Nematoda (to phylum), Nemertea (to phylum), Oligochaeta (to class), Ostracoda (to subclass) and Polychaeta (to class). Some families of Anisoptera (dragonfly larvae) would be identified to species because they could potentially include threatened aquatic species listed under the *Fisheries Management Act, 1994* (FM Act).

2.2.4 Fish

Sampling of fish was done in accordance with the Survey Guidelines for Australia's Threatened Fish (Department of Sustainability, Environment, Water, Population and Communities, 2011). Fish sampling was done at each site using a Smith Root LR-24 backpack electrofisher. The Electrofisher is used to stun fish in open water, around the edge of the pool, around snags and aquatic vegetation and any overhanging banks. All fish caught were identified and the length of each species measured. Incidental observations such as evidence of disease were also noted.

2.2.5 Data Analysis

The water quality measurements taken during the site inspection were used to assess water quality within the study area in terms of health of aquatic ecosystems by comparison with guideline values recommended by ANZECC and ARMCANZ (2000).

The macroinvertebrate data were analysed using the Stream Invertebrate Grade Number Average Level (SIGNAL2) biotic index developed by Chessman (2003), to give an indication of water quality at the sites sampled¹. The SIGNAL2 score for a macroinvertebrate sample is calculated by averaging the pollution sensitivity grade numbers of the families present, which may range from 10 (most sensitive) to 1 (most tolerant). SIGNAL2 values are as follows:

- SIGNAL >6 = Healthy habitat
- SIGNAL 5-6 = Mild pollution
- SIGNAL 4-5 = Moderate pollution, and
- SIGNAL <4 = Severe pollution.

2.2.6 Quality Assurance/Quality Control (QA/QC)

Data collected in the field were checked for accuracy and completeness before leaving each site. In the office, field data and other records were incorporated into appropriate excel data sheets and checked. Spreadsheets were locked prior to analysis to prevent accidental overwrites or corruption.

In the laboratory, macroinvertebrate samples were identified by an appropriately qualified staff member. Data for each sample were entered into an excel spreadsheet and then checked.

¹ Aquatic macroinvertebrates data were not analysed using the AUSRIVAS model on this occasion because samples were not able to be collected within the autumn (15 March to June 15).

3.0 RESULTS

3.1 Survey Dates and Rainfall

The selected sites were sampled on 16 August 2022 by Dr Sharon Cummins (Senior Scientist – Applied Aquatic Ecology) and Mr Shane Murray (Senior Environmental Technician).

Within the two months prior to the survey (i.e. 16 June – 15 August 2022), a total of 289 mm of rain was recorded (Figure 2).

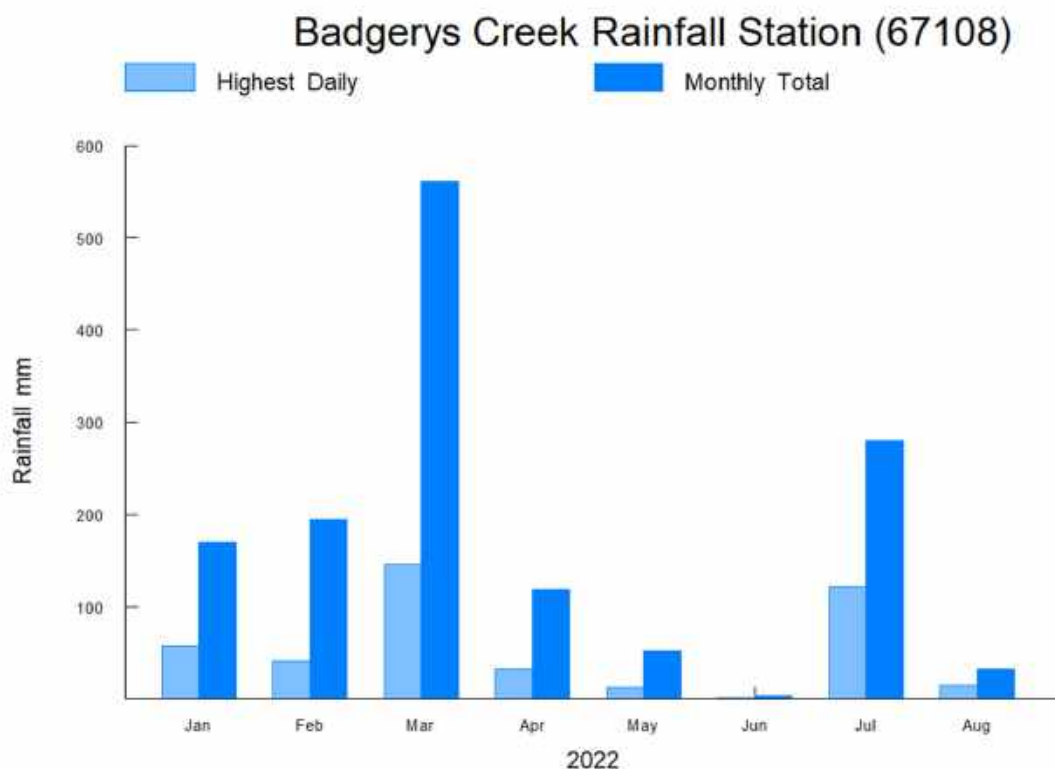


Figure 2. Rainfall (mm) measured at the Badgerys Creek Rainfall Station (67108) between 1 January and 30 August 2022.

3.1 Aquatic Habitat Characteristics

The sections of South Creek, Claremont Creek, Badgerys Creek and Thompson Creek within the Study Area are mapped as Key Fish Habitat by the New South Wales (NSW) Department of Primary Industries (DPI) (NSW DPI, 2022).

Information collected by the targeted survey done in August 2022 has been used to describe the aquatic ecology values at sites that occur within the Study Area, on South Creek, Claremont Creek, Thompson Creek and Badgerys Creek (Figure 1).

Site SC1 @ South Creek

Site SC1 is situated on South Creek, approximately 14 km downstream from the confluence with Badgerys Creek (Figure 1). At the time of the survey, there were signs of recent flooding, including severe scouring of the stream channel and rubbish caught in tree branches (Plates 1&2). Water clarity was considered poor.

This section of the creek is generally characterised by a large pool (up to approximately 12 m wide and 1 m deep) upstream of a weir. Immediately downstream of the weir, the stream channel was approximately 7 m wide. The active channel bed is composed primarily of silts and clay (as are the banks of the main channel) overlying a mostly gravel bed. A range of habitats were available for fish, including large woody debris, rocks and the submerged aquatic macrophyte, *Vallisneria* sp. Flow was apparent and water visibility poor (Plates 1&2).

The tree canopy was comprised by mostly *Casuarina* spp., *Eucalyptus* spp. and some exotic trees. *Lomandra longifolia* (Spiny-head mat-rush), *Persicaria decipiens* (Slender knotweed) and grasses were common, particularly in areas where there were breaks (at intervals of between 5 and 30 m) in the riparian strip. The overall condition of aquatic habitats at Site SC1 was classified as fair, with an RCE score of 35 (67%). South Creek is classified as Class 2, Type 2 (moderate) fish habitat according to the DPI (2013) classification.



Plate 1: SC1 – View downstream (12/09/22)



Plate 2: SC1 – View upstream (12/09/22)

Site SC2

Site SC2 is situated approximately 2.2 km downstream of Site SC1 and approximately 1.2 km downstream of the confluence with Claremont Creek (Figure 1). There were signs of recent flooding, including severe scouring of the stream channel (Plates 3&4). The pool sampled upstream of the bridge was up to 8 m wide and 0.9 m deep. Water clarity was considered poor (Plates 3&4).

The active channel zone, composed of poorly sorted gravel overlain by fine-grained sediments, was up to approximately 8 m wide and 0.9 m deep (Plates 3&4). An abandoned shopping trolley and car were scattered along the stream channel, as well as occasional large woody debris. The tree canopy was comprised by mostly *Casuarina* spp., *Eucalyptus* spp. and some exotic trees. *Lomandra longifolia* (Spiny-head mat-rush), and grasses were common and Balloon Vine (*Cardiospermum grandiflorum*). The overall condition of aquatic habitats at Site SC2 was classified as fair, with an RCE score of 35 (67%).



Plate 3: SC2 – View downstream (16/08/22)



Plate 4: SC2 – View upstream (16/08/22)

Site CC @ Claremont Creek

Site CC is situated upstream of the bridge along Werrington Road, approximately 800 m upstream of the confluence with South Creek. The stream channel is highly modified, particularly in the downstream reaches of the study site, where the channel narrowed to approximately 2 m wide and 0.1 m deep. Water visibility was moderate.

A large stand of the emergent macrophyte species, (mostly *Phragmites australis*), had colonised the downstream reaches of the site, to the bridge and beyond (Plate 6). A large pool (up to approximately 6 m wide and 1 m deep), surrounded by a dense but narrow stand of *Casuarina* spp., *Eucalyptus* spp. and some exotic trees (Plate 7). The stream banks at Site CC appeared stable, mostly due to dense cover of exotic grasses in areas where the riparian zone was not colonised by trees (Plates 5&6). This site is considered Class 2, Type 2 (moderate) fish habitat according to the DPI NSW (2013) classification. The overall condition of aquatic habitats at Site CC was classified as fair. It received an RCE score of 25 (48%).



Plate 5: Site CC – view upstream (16/08/22)



Plate 6: Site CC – view downstream (16/08/22)

Site TC @ Thompsons Creek

Site TC is situated within the middle-downstream reaches of Thompsons Creek, approximately 1.5 km upstream of the confluence with South Creek (Figure 1). The Retreat Road bridge crosses the creek at the bottom of the study reach. Except for a narrow (~ 10m wide) riparian strip, the surrounding land had mostly been cleared for rural residential blocks.

A relatively wide (up to 15 m) pool had formed at the bottom of the study reach, most likely due to the presence of the bridge (Plates 7&8). Immediately upstream, the stream channel was

up to 1 m wide and 0.2 m deep. The pool substratum was composed primarily of clay and silt with gravel (approximately 40%) and a considerable cover of green filamentous algae. Large woody debris was abundant. Water clarity was considered poor.

Extensive cover by *Casuarina* spp. within the riparian zone contributes stability to the stream bank. The understorey was dominated by exotic species, particularly Wandering Jew (*Tradescantia albiflora*) and grasses. This site is considered Class 2, Type 2 (moderate) fish habitat according to the DPI NSW (2013) classification. The overall condition of aquatic habitats at Site TC was classified as fair. It received an RCE score of 35 (67%).



Plate 7: Site TC – view from the downstream end upstream (16/08/22)



Plate 8: Site TC – view upstream (16/08/22)

Site BC @ Badgerys Creek

Site BC is situated within the midstream reaches of Badgerys Creek, approximately 6.7 km upstream of the confluence with South Creek. The surrounding land use was mostly agricultural. Badgerys Creek Road bridge crosses the creek at the bottom of the study reach. At the time of the survey, this site consisted of a pool up to 5 m wide, which transitioned into two narrow channels either side of a large bar in the downstream section before the bridge (Plates 9&10). The average channel width was 2 m with an average depth of 0.1 m. Recent scouring of the stream banks was apparent. The substrate consisted of silt and clay with gravel (approximately 40%). Large woody debris was common in the creek channel and along the banks (Plates 9&10). Water clarity was poor.

Emergent macrophytes included *Juncus* sp. and *Persicaria decipiens*. The riparian zone consisted of a band of tall *Casuarina* spp. And occasional *Eucalyptus* trees. Understorey species included *Lomandra longifolia*, exotic grasses and Wandering Jew. The site is considered Class 2, Type 2 (moderate) fish habitat according to the DPI NSW (2013) classification. The overall condition of aquatic habitats at Site BC was classified as fair. It received an RCE score of 35 (67%).



Plate 9: Site BC – view downstream (16/08/22)



Plate 10: Site BC – view upstream (16/08/22)

3.2 Water Quality

Mean physico-chemical water quality measurements from 16 August 2022 are summarised in Table 2. Values highlighted in bold type indicate where results were outside the appropriate default trigger values (DTV) recommended by ANZECC/ARMCANZ (2000).

The main findings for the water quality survey are summarised as follows:

- Mean water temperature ranged from 10.7 to 11.6 °C
- pH levels (range = 7.5 – 8.9) exceeded the DTVs recommended by the ANZECC/ARMCANZ (2000) guidelines at the sites sampled in Claremont Creek (Site CC), Thompsons Creek (TC) and Badgerys Creek (Site BC)
- Mean conductivity levels (range = 1,230 to 3,121 $\mu\text{S}/\text{cm}$) exceeded the upper DTV at Site CC and TC
- Dissolved oxygen levels (range = 72 to 101.3 % saturation) were below the DTV at site 1 situated on South Creek (Site SC1) and CC
- Turbidity levels (range = 5.8 to 67.4 NTU) exceeded the upper DTV at Site SC-1 and SC-2 (Table 2).

Table 2. Mean (\pm SE) physico-chemical water quality values recorded at the time of the Baseline (16 August 2022) survey and the appropriate Default Trigger Values (DTV). Values highlighted in bold type indicate where results were outside the recommended DTV.

Site	DTV*	SC1	SC2	CC	TC	BC
Temperature °C	-	11.5 (0.0)	11.6 (0.0)	11.3 (0.0)	10.7 (0.0)	11.2 (0.0)
pH	6.5-8.0	7.5 (0.0)	8.4 (0.0)	8.7 (0.0)	8.9 (0.0)	8.6 (0.0)
Conductivity (μ S/cm)	125-2200	1230 (0.3)	1330 (0.3)	3121 (0.9)	2259 (0.3)	1964 (0.0)
Dissolved Oxygen (%)	85-110	72 (0.1)	78 (0.2)	82 (0.0)	88 (0.2)	101 (0.1)
Turbidity (NTU)	6-50	67 (2.1)	60 (0.3)	6 (0.1)	46 (0.1)	22 (0.1)
Alkalinity (mg/L CaCO ₃)	-	35	70	100	45	60

*ANZECC/ARMCANZ (2000) - slightly disturbed systems

3.3 Aquatic Macroinvertebrates

A total of 28 taxon were identified from edge habitat samples collected at the five sites sampled in August 2022 (Table 3). The number of taxa ranged from 3 at Site SC2 on South Creek to 14 at the Badgerys Creek site (Table 3). Atyidae (freshwater shrimps), Chironominae (non-biting midges) and Leptoceridae (caddisflies) were collected at four of the five sites sampled (Table 3).

The SIGNAL 2 scores ranged from 2.87 (Sites BC) to 4.33 (SC2) (Table 4). Low values of both the SIGNAL2 score (≤ 4.00) and macroinvertebrate diversity (< 15 taxa) were obtained at the tributary sites (i.e., CC, TC and BC) (Table 3). Sites with low diversity and SIGNAL 2 scores are likely to be suffering from one or more forms of human impact, such as urban, industrial, and agricultural pollution and/or the downstream effects of dams (see Chessman, 2003).

Relatively high SIGNAL 2 scores but low diversity at the South Creek sites indicates that these sites are likely to be exposed to toxic pollution or harsh physical conditions, such as flooding (see Chessman, 2003). Floods can wash macro-invertebrates away, so that few types are collected if sampling occurs soon after the flood has receded. This survey was done after recent flood events, which is likely to have contributed to the lower diversity recorded at the sites sampled along South Creek.

Table 3. Macroinvertebrate taxa collected using the AUSRIVAS protocol (16 August 2022) and the SIGNAL 2 indices calculated for each site.

Taxa	Common Name	SC1	SC2	CC	TC	BC
Acarina	Water mite	0	0	0	1	0
Atyidae	Freshwater shrimp	2	0	1	2	1
Baetidae	Mayfly	0	1	0	0	1
Bithyniidae	Freshwater snail	0	2	0	0	0
Caenidae	Mayfly	0	0	0	4	2
Chironomidae- Chironominae	True fly	8	0	11	2	4
Chironomidae- Tanypodinae	True fly	0	0	0	0	1
Coenagrionidae	Damselfly	2	0	2	0	5
Corixidae	Aquatic bug	4	0	0	5	2
Dytiscidae	Beetle	0	0	0	4	10
Ecnomidae	Caddisfly	0	0	0	1	0
Gomphidae	Dragonfly	0	0	0	1	0
Hydrobiidae	Freshwater snail	0	0	17	0	0
Hydrophilidae	Beetle	0	0	0	0	1
Hydropsychidae	Caddisfly	4	0	0	0	0
Leptoceridae	Caddisfly	6	0	1	7	10
Megapodagrionidae	Damselfly	0	0	0	0	2
Notonectidae	Aquatic bug	0	0	0	0	1
Oligochaete	Segmented worm	1	0	0	1	0
Physidae	Freshwater snail	1	0	2	0	18
Planorbidae	Freshwater snail	0	0	1	0	0
Pleidae	Aquatic bug	0	0	0	0	1
Ptilodactylidae	Beetle	1	0	2	0	0
Simuliidae	True fly	1	2	0	1	0
Sphaeriidae	Bivalve	1	0	0	0	0
Tipulidae	True fly	0	0	1	0	0
Turbellaria	Primitive worm	0	0	1	0	0
Veliidae	Aquatic bug	0	0	1	1	0
Number of Taxa		11	3	11	12	14
SIGNAL-2 (families)		4.18	4.33	3.53	3.69	2.87

3.4 Fish

At the time of the aquatic survey, the site sampled at Claremont Creek was unable to be sampled using the electrofisher, due to elevated salinity (mean = 3,121 $\mu\text{S}/\text{cm}$). Backpack electrofishing can only be performed in water of low to moderate salinity (up to 2,000 $\mu\text{S}/\text{cm}$ depending on unit specifications²).

Three native species of fish, including Long-finned (*Anguilla reinhardtii*) and Short-finned (*Anguilla australis*) eels (range = 6-60 cm in length) and one Striped gudgeon (*Gobiomorphus australis*), were recorded. The introduced species, Mosquito fish (*Gambusia holbrooki*), was caught in dip nets used to sample aquatic macroinvertebrates (Table 4).

All of the species caught are common within NSW (McDowall, 1996; DPI 2006; Howell and Creese, 2010). No threatened species of fish listed under the *NSW Fisheries Management Act, 1994* or the *Environment Protection and Biodiversity Conservation Act, 1999* were recorded.

Table 4. Species of fish and crustaceans collected (16 August 2022).

Species	Common Name	SC1	SC2	CC [#]	TC	BC
<i>Anguilla reinhardtii</i>	Long-finned eel	√			√	√*
<i>Anguilla australis</i>	Short-finned eel				√	√*
<i>Gobiomorphus australis</i>	Striped gudgeon	√				
<i>Gambusia holbrooki</i>	Mosquito fish [^]			√	√	
<i>Atyidae</i> sp.	Freshwater shrimps	√		√	√	√

[^]Non-native/Alien species

[#] The Claremont Creek site was unable to be sampled using the electrofisher, due to elevated salinity (mean = 3,121 $\mu\text{S}/\text{cm}$).

*Eels recorded at Badgerys Creek were unable to be identified to species level due to their small size (~ 6 cm in length)

3.5 Limitations

- Only one Baseline survey was sampled
- Sampling was unable to commence until August 2022 due to flood related delays
- Water quality measurements collected during the biological sampling only provide a snapshot of quality at the time of sampling under the prevailing flow conditions.

² As the salinity of the water increases, so does the demand on power needed to maintain a suitable electrical field.

4.0 DISCUSSION

4.1 Aquatic Habitat

The findings of this and previous investigations indicate that aquatic habitats within the Study Area are highly modified due primarily to historic land clearing for agricultural and urban land use. With the exception of sporadic Casuarina and Eucalyptus trees, *Lomandra longifolia* (Spiny-head mat-rush) and *Persicaria decipiens* (Slender knotweed), the riparian vegetation was commonly dominated by dozens of exotic weeds. The overall condition of aquatic habitat at the sites sampled was classified as ‘fair’, with RCE scores of between 25 and 35.

Nevertheless, the presence of Long-finned (*Anguilla reinhardtii*) and Short-finned (*Anguilla australis*) eels (range = 6-60 cm in length) and Striped gudgeon (*Gobiomorphus australis*) indicates that creeks within the Study Area are providing habitat for native species of fish.

4.2 Water Quality

Water quality at the survey sites is influenced by various types of anthropogenic disturbance. This was evident in several indicators (elevated conductivity, pH and turbidity and reduced dissolved oxygen levels) being outside recommended guideline values for the protection of aquatic life.

High salinity within the area is thought to be related to the increased water table recharges due to reduced vegetation water use by land clearing, over irrigation of golf courses, sport fields, parks, gardens, crops and improved pastures, and leakage from farm dams, water supply and stormwater services (DLWC, 1998). Salinity levels are rising in many freshwater environments world-wide, including Australia (Williams, 1987).

Determining the specific threat that salinity poses can be complicated due to salinity being confounded with other changes in the environment, variation in the ionic proportions of salinity and temporal variation in salinity levels (i.e. pulse, press or ramp) (Farag and Harper, 2012; Kefford et al., 2013). Furthermore, the presence of a species at a particular salinity does not necessarily mean that it can complete its lifecycle at that salinity (Kefford et al., 2003). A number of specific types of experimental studies are required in this context, including experimental mesocosm studies, field studies at targeted sites, and long-term laboratory

experiments to determine the chronic and sublethal salinity sensitivity of macroinvertebrate taxa (Kefford et al., 2013). Currently, in most cases, the 95 per cent protection level trigger value should apply to ecosystems that could be classified as slightly to moderately disturbed (ANZECC/ARMCANZ, 2000).

4.3 Aquatic Macroinvertebrates

Low values of both the SIGNAL2 score (≤ 4.00) and macroinvertebrate diversity (< 15 taxa) were obtained at the tributary sites (i.e., Claremont Creek, Thompsons Creek and Badgerys Creek). Sites with low diversity and SIGNAL 2 scores are likely to be suffering from one or more forms of human impact, such as urban, industrial, and agricultural pollution and/or the downstream effects of dams (see Chessman, 2003).

Relatively high SIGNAL 2 scores but low diversity at the South Creek sites indicates that these sites are likely to be exposed to toxic pollution or harsh physical conditions (see Chessman, 2003). There have been recent high flows from flooding within the area, which can wash macro-invertebrates away, so that few types are collected if sampling occurs soon after the flood has receded. This survey was done after recent flood events, which is likely to have contributed to the lower diversity recorded at the sites sampled.

In addition, several of the water quality variables measured, including conductivity, dissolved oxygen, pH and turbidity, did not meet guideline values recommended for the protection of slightly disturbed systems by ANZECC/ARMCANZ (2000). When two or more stressors approach their respective guidelines, additive, synergistic or antagonistic effects are possible (see Meador, 1991; Zalizniak et al., 2009).

Nevertheless, some pollution sensitive taxa were present in the creeks sampled, including mayfly and caddis fly families, and at the time that surveys were conducted in autumn 2015 (GHD, 2016). Of note, groups within these families, particularly Baetidae, as well as Chironomidae and several freshwater snails and worms that were present, are amongst the most salt-sensitive freshwater macroinvertebrates (Kefford et al., 2003; Rutherford and Kefford, 2005).

4.4 Fish

At the time of the current survey, three native species of fish, including Long-finned (*Anguilla reinhardtii*), Short-finned (*Anguilla australis*) eels and Striped gudgeon (*Gobiomorphus australis*), were recorded. The introduced species, Mosquito fish (*Gambusia holbrooki*), was caught in dip nets used to sample aquatic macroinvertebrates at the study sites sampled on Thompsons and Badgerys Creeks.

A total of five native species (Firetail gudgeon (*Hypseleotris galii*), Western carp gudgeon (*Hypseleotris klunzingerii*), Australian smelt (*Retropinna semoni*), an un-identified Gudgeon species, and Long-finned eels) and three alien species (Goldfish (*Carassius auratus*), Common carp (*Cyprinus carpio*) and Mosquito fish) were recorded by the survey undertaken by GHD (2016).

All of the species caught are common within NSW (McDowall, 1996; Howell and Creese, 2010). No threatened species of fish listed under the NSW FM Act or the *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) were observed. Notably, eels are known for their ability to overcome moderate-sized structures to migrate and to survive out of water for a long-period of time (Langdon and Collins, 2000).

Mosquito fish commonly thrive in disturbed habitats and still waters (McDowall, 1996), especially when the pre-existing assemblages are depauperate (Ross, 1991). Predation by Mosquito fish is listed as a Key Threatening Process by the NSW *Biodiversity Conservation Act 2016*, because of known effects on frogs, freshwater fishes and aquatic macroinvertebrates, among others.

5.0 CONCLUSIONS

Aquatic habitat and water quality at the survey sites is influenced by various types of anthropogenic disturbance. Nevertheless, some pollution sensitive macroinvertebrates were present, including caddis fly and mayfly families, and at the time that surveys were conducted in autumn 2015 (GHD, 2016). The presence of Long-finned and Short-finned eels and Striped gudgeon indicates that creeks within the Study Area are providing habitat for native species of fish.

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May 18, 2023

CPB Contractors and Ghella Joint Venture

Page 1 of 18

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

To:

CPB Contractors and Ghella
Joint Venture

From:

Date: 18 May 2023

Reference: Badgery's Creek Aquatic Ecology Technical Memo

1.0 INTRODUCTION

CPB Contractors and Ghella Joint Venture ('CPBG') were awarded the contract to build the Western Sydney Airport Station Boxes and Tunnelling Works package (the Project) as part of the Western Sydney Airport works. As a result of the tunnelling and station box excavation activities, CPBG will intercept volumes of groundwater from within the project footprint, which will be mixed with clean process water and sent to a Water Treatment Plant (WTP) for treatment and removal of contaminants. The treated tunnel water (effluent) will then be discharged to Badgerys Creek (33°53'54.67S, 150°44'12.33E) via an enclosed pipe that culminates at the creek tie for the existing WSA Detention Basin DB3 spillway. This water will be dissimilar to the water in the receiving environment.

CPBG has engaged Stantec Australia Pty Ltd ('Stantec') to undertake an aquatic ecology assessment along a portion of Badgery's Creek to inform a Water Discharge Application. The assessment has been completed in general accordance with the *Policy and Guidelines for Fish Habitat Conservation and Management* (NSW DPI, 2013).

1.1 MODELLED DISCHARGES TO BADGERYS CREEK

Discharges to Badgerys Creek will occur for approximately 15 months and will be of a higher salinity (3,238-8,648 mg/L), nitrogen and phosphorous than the receiving waters. 0.45 ML/day of treated effluent will be discharged in Badgerys Creek under an average discharge scenario, 0.57 ML/day will be discharged under the 'worst case' scenario. This effluent will mix with flows in Badgerys Creek. Median flows in the creek are 0.18 ML/day and 20th percentile flows 0.017 ML/day. Effluent will more than double flows within Badgerys Creek under all circumstances. The volume of effluent will be 33 times more than what is in the creek if the 'worst case' discharge scenario occurs during 20th percentile river flows.

Modelling data provided by CPBG indicates that salinity in Badgerys Creek will return to close to ambient conditions within a short distance [~50 meters (m)] of the discharge point. The model tested a range of scenarios across different flow condition and discharge concentrations (salinity, nitrogen, and phosphorus).

Under median flow rate conditions, a discharge of maximum salinity (8,648 mg/L) into receiving waters of 1058 mg/L was modelled a concentration of 1229 mg/L (16% increase) 50m downstream of the discharge point. Using the same parameters except under low flow conditions (20th percentile) a salinity concentration of 1287 mg/L (22% increase) was seen in the model 50m downstream of the discharge point. Closer to the discharge point under low flow condition, salinity was modelled to be 2888 mg/L at 20m (173% increase) and 4717 mg/L at 10m (345% increase).

Similar results were witnessed for nitrogen and phosphorous mixing. In a median flow scenario with maximum discharge concentrations; nitrogen returned to within 4% of ambient conditions at 50m and phosphorous within 2%. This relationship was similar for low flow (20th percentile) conditions.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

1.2 LEGISLATIVE CONTEXT

Fisheries Management Act 1994

The *Fisheries Management Act 1994* (FM Act) contains provisions for the conservation of fish stocks, Key Fish Habitat (KFH), biodiversity, threatened species, populations, and ecological communities. The FM Act regulates the conservation of fish, aquatic vegetation and some aquatic macroinvertebrates and the development and sharing of fishery resources of NSW for present and future generations. Part 7 of the FM Act identifies requirements for the protection of aquatic habitats while Part 7A of the FM Act lists threatened species, populations and ecological communities and Key Threatening Processes (KTPs) for species, populations, and ecological communities in NSW waters. Section 220ZZ of the FM Act outlines significant impact considerations to threatened species, populations and ecological communities listed under the FM Act.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

2.0 METHODOLOGY

2.1 STUDY SITES

The sites are located along a portion of Badgerys Creek within the Liverpool Local Government Area. The discharge location is approximately 160 m west of the Badgerys Creek Road bridge. The discharge zone consisted of boulders and a man-made channel (**Plate 1/2**).

Two sites were chosen downstream of the discharge location (impact sites) and one upstream of the discharge location as a control/reference site (**Figure 1**):

- Site 1: located around 150 m upstream of the discharge location.
- Site 2: located around 150 m downstream of the discharge location.
- Site 3: located around 250 m downstream of the discharge location.

The survey was undertaken on 11 May 2023.



Plate 1: The discharge channel

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023



Plate 2: Connection of the discharge channel and Badgery's Creek

2.2 WATER QUALITY

Water quality was measured in-situ at each site using a calibrated YSI water quality probe. Two replicate readings of water quality were taken at each site and one in-field alkalinity titration per site. Physio-chemical variables measured at each location included:

- Electrical Conductivity ($\mu\text{S}/\text{cm}$).
- Salinity (mg/L).
- Temperature ($^{\circ}\text{C}$).
- Turbidity (NTU).
- Dissolved Oxygen (DO) (mg/L and % saturation).
- pH.
- Oxidation Reduction Potential (mV).
- Alkalinity (mg/L).

Recorded physio-chemical parameters were then assessed against assessed against the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (ANZECC/ARMCANZ, 2000) Default Trigger Values (DTVs) for south-eastern Australian lowland river ecosystems (ANZECC/ARMCANZ, 2000).

2.3 RIPARIAN CONDITION

The condition of the aquatic habitat at each site was assessed using a modified version of the Riparian, Channel and Environmental (RCE) inventory method. This assessment involves evaluation and scoring of the characteristics of the adjacent land, the condition of riverbanks, channel and bed of the watercourse, and degree of disturbance evident at each site. The maximum score (52) indicates a stream with little or no obvious physical disruption and the lowest score (13) indicates a heavily channeled stream without any

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

riparian vegetation. This methodology was developed by Peterson (1992) and modified for Australian conditions by Chessman et al. (1997) by combining some of the descriptors, modifying some of the associated categories and simplifying the classifications from 1 to 4. RCE scores for each site were calculated and assigned an overall condition score.

2.4 FISH AND AQUATIC FAUNA

Fish and aquatic fauna were sampled using six collapsible bait traps (40 cm x 20 cm x 20 cm with 2-3 mm mesh, tapering to a 3 cm entrance) and one fyke net (panels up to 8 m long, central funnel 3.5 m long, with 18-30mm mesh) in accordance with Stantec's scientific collection permit F86/670(A)-8.2 (formerly Cardno Pty Ltd). Traps were deployed at the sites for up to 60 minutes. All caught fish were identified. Following identification, all native species were released unharmed. Any pest species caught were humanely destroyed. Backpack electrofishing was not undertaken at any of the sites due to elevated Electrical Conductivity (EC) (>2000 $\mu\text{S}/\text{cm}$).

2.5 MACROINVERTEBRATES

Aquatic macroinvertebrates were collected using the AUSRIVAS Rapid Assessment Methodology (RAM) (Turak et al. 2004) at each sites. AUSRIVAS sampling was carried out in pools with suitable representative edge habitat (eg detritus, overhanging vegetation, macrophytes and substrate present). Samples were collected only along the edge habitat with dip nets (250 micrometres mesh) over a period of 3-5 minutes from a 10m length of habitat within a 100m reach of the creek at each site. The dip net was used to agitate and scoop up material from vegetated river edge habitats. Where the habitat was discontinuous, patches of habitats with a total length of 10m were sampled over the 100m reach.

Each RAM sample was rinsed from the net onto a white sorting tray from which animals were 'picked' live using forceps and pipettes. Each tray was picked for a minimum period of forty minutes, after which they were picked at ten-minute intervals either until no new specimens had been found or total of 60 minutes (i.e. the initial 40 minutes plus up to another 20 minutes). Care was taken to collect cryptic and fast moving animals in addition to those that were conspicuous and/or slow. The animals collected at each site were placed into a labelled jar containing 70 per cent alcohol/water for subsequent taxonomic identification in the Stantec laboratory.

The Stream Invertebrate Grade Number – Average Level (SIGNAL2) biotic index (Chessman, 2003) was used to assess ecological quality of the sites by using different pollution levels of different macroinvertebrates. The index assigns a score to each family, with 1 being most tolerant and 10 being most sensitive. The index score can then be generally interpreted as the following ratings:

- SIGNAL > 6 = Healthy habitat.
- SIGNAL 5 – 6 = Mild pollution.
- SIGNAL 4 – 5 = Moderate pollution.
- SIGNAL < 4 = Severe pollution.

In addition to the SIGNAL2 score the number of families from Ephemeroptera, Plecoptera and Trichoptera were recorded. These 'EPT' taxa are sensitive to pollution with their presence providing evidence for a 'healthy river' The number of EPT taxa is a widely recognized index used to assess stream health.

2.6 LIMITATIONS

Survey efficacy is influenced by a range of factors. For this type of survey, limitations are generally due to the survey being a single event of short duration that does not account for seasonal or other temporal

May 18, 2023

CPB Contractors and Ghella Joint Venture

Page 6 of 18

Reference: **Badgerys Creek Aquatic Ecology Tech Memo – May 2023**

variation. Being based on a single event this assessment cannot be considered a baseline. Certain species may not have been detected due to:

- Seasonal migration (particularly migratory and transient species).
- Seasonal availability of food for fauna.
- Weather conditions during the survey period (some species may go through cycles of activity related to specific weather conditions).
- Species lifecycle (cycles of activity related to breeding).

These potential limitations have been addressed by applying the precautionary principle in cases where the survey methodology may have given a false negative result (i.e. a species that could reasonably be expected to occur, based on previous records and available habitat, was not observed). All species (including threatened species) have been assessed based on the presence of their habitat and the likely significance of that habitat to a viable local population.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

3.0 RESULTS

3.1 AQUATIC HABITAT

Site 1

Site 1 consisted of one large deep brown coloured pool, over 1.2 m deep in areas (**Plate 3/4**). The mean wetted width of the waterway was approximately 9 m. Little to no flow was witnessed during the survey period. The creek bed substrate was unable to be visually assessed during the survey due to poor water clarity, however while undertaking the instream water quality sampling the substrate was determined to be largely silty clay with some submerged woody debris. Large woody debris was observed at the upstream extent of the site, consisting of fallen trees with accumulated detritus.

The riparian zone was of good condition with *Mealeuca* sp. and *Casuarina* sp. most dominant. These trees provided moderate instream shading (>50%). On the ground level the exotic rush (*Juncus urisitatus*) and with Wandering Trad (*Tradescantias* sp.) lined the creek providing overhanging edge habitat. Site 1 scored 32 out of a possible 52 in the RCE assessment. At Site 1 the noxious floating weed *Salvinia* (*Salvinia molesta*) was seen on the surface. *Salvinia* coverage increased downstream of the site where the water surface was almost entirely covered (~80% coverage) (**Plate 5**).



Plate 3: Site 1 (facing upstream)

Reference: **Badgerys Creek Aquatic Ecology Tech Memo – May 2023**



Plate 4: Site 1 (facing downstream)



Plate 5: Downstream of Site 1, water surface infested with *Salvinia* sp.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

Site 2

Site 2 was located around 150 m downstream of the discharge location. The site was characterised by a series of shallow pools and runs. Site 2 had the most extensive macrophyte communities of the sites surveyed (**Plate 6/7**). The average wetted width was around 5 m and the water clarity was poor appearing brown in colour.

The upstream extent of Site 2 consisted of a large shallow pool (around 0.2 m in depth) which extended most of the width of the bridge culvert and contained two stands of stands of Cumbungi (*Typha* sp.) either side of the bridge (**Plate 6**). Adjacent to the downstream Cumbungi stand, the channel was vegetated with emergent macrophytes Dirty Dora (*Cyperus diffomis*), Slender Knotweed (*Trochlea mutica*) and other exotic grasses and weeds. Flows were low but did not seem to be restricted in this vegetated section (2 m wetted width) (**Plate 7**) which flows into another shallow pool. During periods of low rainfall these pools may become disconnected, potentially restricting the passage of fish and other aquatic fauna.

No large woody debris was observed at Site 2. The riparian zone was dominated by *Casuarina* sp. providing moderate instream shading (>50%), with Wandering Trad dominating the groundcover. The stream banks within the reach consisted of hard clays, with the channel substrate comprised mainly by silts and clays with some areas of bedrock and gravels observed. Site 2 scored 35 out of a possible 52 in the RCE assessment.



Plate 6: Upstream extent of Site 2 below the culvert (facing downstream), stand of Cumbungi on the right bank

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023



Plate 7: Downstream extent of Site 2 (looking downstream), shallow pool around 0.2 m deep and 5 m wetted width. Fyke net visible.

Site 3

Site 3 consisted predominantly of soft substrate pool habitat and large woody debris (**Plate 8/9**). The average wetted width was around 7 m, constricting to between 2-4 m on curves. The banks were generally steep rising around 2-3 m. The mean creek depth was 0.6 m as measured with the substrate comprised of silts and clays. The water clarity was poor appearing brown in colour.

The riparian zone was dominated by *Casuarina* sp. but also included *Melaleuca* sp. and *Eucalyptus* sp., which provided moderate instream shading (>50%), the mid-storey was generally sparse with emergent *Casuarina* sp. and other shrubs. The ground cover was infested with Wandering Trad which was observed along the banks. *Juncus* sp. was also sparsely observed along the banks of Site 3. Throughout the site several areas of flood debris were observed consisting of large woody debris and detritus (mainly *Casuarina* sp. needles) providing habitat for fish and macroinvertebrates (**Plate 10**). Minor bank undercutting of the banks was observed in some locations. Site 3 scored 34 out of a possible 52 in the RCE assessment.

Reference: **Badgerys Creek Aquatic Ecology Tech Memo – May 2023**



Plate 8: Site 3 (facing downstream)



Plate 9: Site 3 (facing upstream)

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023



Plate 10: Large woody debris snags at Site 3

Overall, the aquatic habitat within waterbody inspected during the field survey was considered to be in fair condition given the context of the location and the level of background disturbance. The habitat present at all sites is considered Class 2, Type 2 Moderately Sensitive KFH (NSW DPI, 2013).

3.2 WATER QUALITY

The mean of the physio-chemical parameters recorded at each site are presented in **Table 1** below. These figures are assessed against the ANZECC/ARMCANZ DTVs. EC was high across all sites, in excess of 4000 $\mu\text{S}/\text{cm}$ and above the DTV. DO were low across all sites and below DTVs. DO was particularly low at Site 1 and Site 3 which may be attributed to low flow conditions. Turbidity values were also high, particularly at Site 1 (88 NTU) and Site 2 (416 NTU) which were above the DTV. Alkalinity was uniform across all site's indicative of moderately hard waters (140-150 mg/L). pH was within the DTVs at all sites.

Table 1 Water quality parameters on 11 May 2023

Parameter (unit)	ANZECC/ARMCANZ 2000 DTV	Site 1	Site 2	Site 3
Temperature ($^{\circ}\text{C}$)	-	11	11	10
Electrical Conductivity ($\mu\text{S}/\text{cm}$)	125-2200	4030	4261	4197
Salinity (mg/L)	-	2200	2300	2200
pH	6.5-8.0	7.4	7.5	7.6
ORP (mV)	-	56	63	77
Dissolved oxygen (% saturation)	85-110	39	58	35

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

Turbidity (NTU)	6-50	88	417	29
Alkalinity (mg/L)	-	150	140	150

***Bold** indicates an exceedance of ANZECC 2000 lowland river default guideline values for south-east Australia (Table 3.3.2-3.3.3)

3.3 FISH AND AQUATIC FAUNA

A search for records of freshwater species with 10 kilometres from the site on the Atlas of Living Australia (ALA, 2023) revealed several records of native species including, Firetail Gudgeon (*Hypseleotris galii*), Flathead Gudgeon (*Philypnodon grandiceps*), Cox Gudgeon (*Gobiomorphus coxii*), Southern Shortfin Eel (*Anguilla australis*), Common Galaxid (*Galaxias maculatus*), Long-finned Eel (*Anguilla reinhardtii*), Dwarf Flathead Gudgeon (*Philypnodon macrostomus*), Nepean Herring (*Potamalosa richmondia*) and Blue Eye (*Pseudomugil signifier*). The Atlas of Living Australia also had records for numerous aquatic pest species within nearby waterways (ALA, 2023) including Eastern Gambusia, European Carp, Goldfish (*Carassius auratus*). These species were also recorded by surveys completed by GHD (2016).

Two species of fish were recorded during the surveys, native Flathead Gudgeon (*Philypnodon grandiceps*) and the pest species Eastern Gambusia (*Gambusia holbrooki*). Two Flathead Gudgeon were caught at Site 3 within bait traps near large woody debris. Eastern Gambusia was regularly caught at all sites (>10 per site). No species were recorded during the survey that are listed as threatened under the FM Act or the *Environmental Protection and Biodiversity Conservation Act 1999*. Potential habitat for threatened species was not recorded at any site.

3.4 MACROINVERTEBRATES

Raw macroinvertebrate data from the AUSRIVAS sampling is in **Table 2** with EPT taxa in bold. Total taxon richness, EPT taxon, and derived SIGNAL2 scores are tabulated for each site in

Table 3.

The number of macroinvertebrate taxa collected in the AUSRIVAS edge samples ranged between 10 and 17. Site 1 contained the least number of families but the greatest number of sensitive EPT taxa with a SIGNAL2 score of 4.3, indicating moderate pollution. Site 2 contained the greatest number of taxa however many of the taxa recorded were pollutant tolerant (i.e. Families: Culcidae, Hirudinidae and Physidae) resulting in the lowest SIGNAL2 score, 3.5 indicating severe pollution. Site 3 contained a similar number of taxa to Site 1, also with two EPT taxa. Many of the recorded taxa at Site 3 were moderately tolerable to pollution (i.e. such as Chironimidae) resulting in a SIGNAL2 score of 4.2 indicating moderate pollution.

Table 2 Raw macroinvertebrate data. EPT taxa in bold.

Family	Site 1	Site 2	Site 3
Aeshnidae	0	1	1
Araneae	1	1	0
Atyidae	3	1	1
Baetidae	0	0	1
Ceratopogonidae	1	1	0
Chironomidae (Chironominae)	8	10	10
Chironomidae (Tanypodinae)	0	10	4

May 18, 2023

CPB Contractors and Ghella Joint Venture

Page 14 of 18

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

Cladocera	0	2	1
Copepoda	4	0	6
Corixidae	3	0	10
Culicidae	0	1	0
Dixidae	0	0	1
Dytiscidae	0	10	0
Entomobryidae	2	0	0
Haliplidae	0	1	0
Hemicorduliidae	0	6	5
Hirudinidae	0	10	0
Hydracarina	0	2	0
Hydraenidae	0	0	1
Hydrochidae	4	0	0
Hydrophilidae	0	1	0
Isostictidae	9	2	9
Leptophlebiidae	4	3	4
Megapodagrionidae	2	3	2
Nemotoda	0	1	0
Ostracoda	15	10	10
Philopotamidae	3	0	3
Physidae	7	6	0
Scirtidae	1	0	1
Synlestidae	0	2	0

Table 3 Taxa richness, EPT taxa and SIGNAL2 scores (Chessman, 2003)

Site	Taxa Richness	EPT Taxa	SIGNAL2 Score	SIGNAL 2
Site 1	10	2	4.3	Moderate pollution
Site 2	17	1	3.5	Severe pollution
Site 3	15	2	4.2	Moderate pollution

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

4.0 DISCUSSION

The aquatic ecology of three sites on Badgerys Creek were assessed on 11 May 2023. Sites displayed similar aquatic and riparian habitat characteristics, and water quality. DO was uniformly low, and turbidity and conductivity (as a proxy for salinity) uniformly high. These three parameters were all outside the DTVs for south-eastern Australian lowland river ecosystems. With low DO these sites are considered unlikely habitat for native fish. This conclusion was supported by the fish trapping data. Only two native fish; Flathead Gudgeon were caught (Site 2). The pest species Eastern Gambusia was ubiquitous which was expected due to its tolerance to poor water quality and prevalence throughout disturbed NSW streams.

Overall, the aquatic habitat within waterbody inspected during the field survey was considered fair given the context of the location and the level of background disturbance. The habitat present at all sites is considered Class 2, Type 2 Moderately Sensitive KFH (NSW DPI, 2013).

Discharges to Badgerys Creek have several pathways through which aquatic ecology could be impacted. Each of these impact pathways are discussed below.

Salinity

Salinity is recognized as an important stressor for aquatic life in freshwater environments. Elevated concentrations of salts in freshwater ecosystems are known to cause significant effects on biota above certain thresholds (Cardno 2010). Salinity may affect organisms directly, through osmotic stress, or indirectly through changes to habitat and food resources (Hart et al. 1991). Interactions between salinity and habitat are complex, however, leading to variable responses of biota with some (e.g. Chironomidae) increasing in abundance at elevated salinity and others (e.g. Ephemeroptera) becoming less abundant (Bailey 1998, Marshal and Bailey 2004).

Australian macroinvertebrates may however have evolved a tolerance for saline conditions due to the comparatively high salt concentrations of our rivers. Williams et al. (1991) for example found no correlation between the composition of macroinvertebrate assemblages along a salinity gradient in southwestern Australia. His research concluded that the Australian fauna may be more resistant to salinity than previously thought. Elevated salinity may only affect particularly sensitive taxa which may not persist in saline environments. Other studies support Williams results in finding no significant reduction in taxonomic richness in saline streams that are then subject to secondary salinization from other sources (Metzeling 1993, Kefford 1998).

Salinity concentrations can however cause mortality above certain concentrations. Rutherford and Kefford (2005) derived maximum salinity field distributions from two large datasets from Victoria and South Australia. The field conditions in which taxa are found were related to their maximum tolerance. Gastropods, Odonata and Coleoptera were relatively tolerant with even the most sensitive occurring up to 2700 mg/L. Oligochaetes and Trichoptera were generally found at salinities below 5000 mg/L, while Plecoptera, Ephemeroptera and Isopoda were considered less tolerant with limits of 4400 mg/L, 2200 mg/L and 800 mg/L, respectively.

These results suggest that the majority of macroinvertebrates appear to be tolerant to elevated salinity in the range 2000 to 8000 mg/L.

Background levels of salinity in Badgerys Creek are high (2200-2300 mg/L) and the water quality generally poor. Local macroinvertebrate assemblages reflect these physical conditions with all sites displaying SIGNAL2 scores indicative of moderate to severe pollution. Few pollution tolerant taxa (EPT) were present with this likely related to the elevated salinity concentrations. The diversity and abundance of native fish was also low. The aquatic ecology of Badgerys Creek is likely adapted to elevated salinity levels.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

Modelled results indicate salinity concentrations return to close to ambient conditions with 50m of the discharge point (median and 20th percentile flow scenarios). Based on this information and the likely tolerance of aquatic communities in Badgerys Creek it is anticipated that discharges from the Project are unlikely to have an impact on aquatic ecology beyond this point. Some localized impacts may be seen, most likely within 0-20m of the discharge point. There may be some shift in macroinvertebrate assemblages in this small stretch of creek. Fish are also unlikely to occupy this habitat. The saline section of creek closest to the discharge point may also act as a barrier to upstream fish passage.

Salinity is not expected to have an impact on aquatic and riparian vegetation which are generally more tolerant than aquatic fauna.

Nutrients (Nitrogen and Phosphorous)

Eutrophication is the process whereby rivers and creeks accumulate nutrients such as nitrogen or phosphorous. This is normally attributed to agricultural land use within the catchment and the runoff of nitrogen and phosphorous heavy fertilizers. Nutrients may also be added to rivers and creeks via point source discharges such as for the Project.

Eutrophication can impact aquatic ecology when the elevated levels of nutrients promote rapid, unsustainable growth of algae and aquatic vegetation including pest species such as *Salvinia* sp which was present during survey. This growth of aquatic vegetation can physically choke waterways whilst the biological processes for growing algae and aquatic vegetation reduces DO levels. Extreme levels of algal growth (algal bloom) can reduce DO below what is required to support aquatic fauna.

The conditions for algal blooms are complex and interrelated. High levels of nitrogen are required for algal blooms however above a certain threshold nitrogen becomes an inhibiting factor. The bioavailability of nitrogen is also important along with other physical characteristics such as water temperature. With the information available Stantec cannot predict the likelihood of impacts to aquatic ecology due to excessive nutrients. The risk of algal blooms can however be mitigated through regular monitoring of the impact sites with frequency increased during warmer periods (favorable conditions for algal growth).

With this mitigation in place the Projects risk to aquatic ecology through eutrophication and algal blooms is thought to be low.

Altered Hydrology

Discharges from the Project have the potential to alter hydrology in Badgerys Creek. 0.45 ML/day of treated effluent will be discharged in Badgerys Creek under an average discharge scenario and 0.57 ML/day will be discharged under the 'worst case' scenario. Median flows in the creek are 0.18 ML/day and 20th percentile flows 0.017 ML/day. Effluent will more than double flows within Badgerys Creek under all circumstances. The volume of effluent will be 33 times more than what is in the creek if the 'worst case' discharge scenario occurs during 20th percentile river flows.

Generally, the addition of water to Australian creeks produces a positive outcome for aquatic ecology with more water improving feeding opportunities and connectivity with downstream environments. Additional flows can cause erosion and bank scour however the banks were witnessed to be well held together and covered by riparian vegetation. There is little evidence of scour even after the recent high flow events at the start of 2023.

Additional flows are likely to be within the local hydrographic range and the risk of erosion or scour is assumed to be low. Stantec is however unable to provide detailed comment on the impact that altered hydrology could have on the aquatic ecology of Badgerys Creek without further information or hydraulic modelling.

Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

5.0 CONCLUSION

As a result of the Project treated effluent will be discharged to Badgerys Creek. Discharges to Badgerys Creek will occur for approximately 15 months and will be of a higher salinity (3,238-8,648 mg/L), nitrogen and phosphorous than the receiving waters. 0.45 ML/day of treated effluent will be discharged in Badgerys Creek under an average discharge scenario. Median flows in the creek are 0.18 ML/day and 20th percentile flows 0.017 ML/day. Modelling data indicates that salinity, nitrogen and phosphorous will return to close to ambient conditions within a short distance (~50m) of the discharge point. The model tested a range of scenarios across different flow condition and discharge concentrations.

The aquatic ecology of three sites on Badgerys Creek were assessed on 11 May 2023. Sites displayed similar aquatic and riparian habitat characteristics, and water quality. DO was uniformly low, and turbidity and conductivity (as a proxy for salinity) uniformly high. These sites are considered unlikely habitat for native fish with this supported by the fish trapping data.

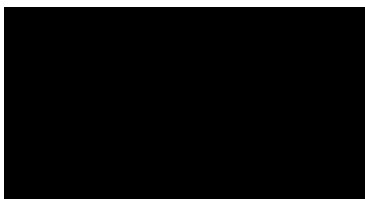
Discharges to Badgerys Creek have several pathways through which aquatic ecology could be impacted. Increased salinity could impact aquatic ecology however background levels of salinity in Badgerys Creek are high (2200-2300 mg/L) and the aquatic ecology of Badgerys Creek is likely adapted to these elevated levels. Local macroinvertebrate assemblages reflect these physical conditions with all sites displaying SIGNAL2 scores indicative of moderate to severe pollution. Few pollution tolerant taxa (EPT) were present. The modelled results indicate salinity concentrations return to close to ambient conditions with 50m of the discharge point (median and 20th percentile flow scenarios). Based on this information and the likely tolerance of aquatic communities in Badgerys Creek it is anticipated that discharges from the Project are unlikely to have an impact on aquatic ecology beyond this point. Some localized impacts may be seen, most likely within 0-20m of the discharge point.

Will the available data the impact of increased nutrients was unable to be quantified however with regular monitoring the risk to aquatic ecology was thought to be low.

Discharges from the Project have the potential to alter hydrology in Badgerys Creek with effluent more than doubling flows across all modelled scenarios. Additional flows can cause erosion and bank scour however the banks were witnessed to be well held together and covered by riparian vegetation. There is little evidence of scour even after the recent high flow events at the start of 2023. Additional flows are likely to be within the local hydrographic range and the risk of erosion or scour is assumed to be low.

Overall, the risk of Project discharges to the aquatic ecology of Badgerys Creek is low. It must be noted that this assessment is based on a single sampling event with associated limitations.

Stantec Australia Pty Ltd




Principal Aquatic Ecologist

Phone: 



Reference: Badgerys Creek Aquatic Ecology Tech Memo – May 2023

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Reference: Badgerys Creek and the Eastern Long-necked Turtle

To:

[REDACTED]

Prepared by:

[REDACTED]

Subject: Eastern Long-necked Turtle in Badgerys Creek

Date: 29 May 2023

Reference: Eastern Long-necked Turtle in Badgerys Creek

1.0 Life History - Eastern Long-necked Turtle

The Eastern long-necked turtle (*Chelodina longicollis*) (also known as the Eastern snake-necked turtle or Common Long-necked turtle) is the most widespread freshwater turtle in Australia. It is distributed throughout south-eastern including Queensland, New South Wales, Victoria and in the south-east of South Australia. The Eastern long-necked turtle belongs to the Chelidae family which are known as the “side-necked freshwater turtles” due to their heads being withdrawn sideways into their carapace rather than directly back.

Eastern long-necked turtles live in freshwater habitats in swamps, lakes, and inland waterways. Most of their time is spent in water however they do travel some distance overland in search of optimal nesting sites and to move between waterbodies. Turtles take advantage of the wetting and drying cycles of their preferred ephemeral habitats and have good water storage capabilities which allow them to lie dormant for extended periods of time.

Eastern long-necked turtles are carnivorous feeding on aquatic invertebrates, tadpoles and small fish. They hunt by bending their neck under their shells and then striking out at prey. Predation of Eastern long-necked turtles primarily occur on juveniles and eggs. Common predators include red foxes, water rats, lizards, fish and birds.

Eastern long-necked turtles are slow to mature. Males reach sexual maturity at around 7-8 years and females between 10-12 years. Once sexually mature, the turtles breed annually in September and October. Clutches of 6-24 hard shelled eggs are laid in holes that are dug out near waterbodies. Nesting usually occurs on soft sand or sediment but can also occur in other substrates such as hard clay. Eggs incubate for 120-150 days, hatching in late summer to early winter. The average lifespan of an Eastern long-necked turtle is 31-37 years however there are records of individuals living for up to 50 years.

2.0 Tolerance to saline conditions

Freshwater organisms maintain and regulate body fluids via osmoregulation. Most species are highly sensitive to their physical environment and the quality of the water they inhabit. Salinity is a key driver that determines the likelihood of persistence of freshwater species.

A study by Bower et al. (2016) looked at the salinity tolerances of two Australian freshwater turtles, *Chelodina expansa* and *Emydura macquarii*, both part of the Chelidae family. The turtles were exposed to freshwater and brackish water conditions (3000 – 10,000 mg/L) and their behaviour and physiology monitored. The results showed both species display adaptive behavioural and physiological mechanisms to saline conditions indicative of tolerance. Behavioural changes in the brackish water conditions included reduction in food (reduce salt intake) and increase in plasma electrolytes (sodium and chloride) and nitrogenous osmolytes (urea and uric acid) both which reduce water loss. The study showed adaptive behaviours to the changed conditions over a 50-day period however the physiological costs over a longer

Reference: Badgerys Creek and the Eastern Long-necked Turtle

period of time that may be associated with these changed behaviours (reduced food intake and high osmolyte levels) was not addressed.

The Eastern long-necked turtle is closely related to both these species and may in fact have a higher salinity tolerance due to the possible presence of a salt-excreting orbital gland. This conclusion is supported by the species broad distribution through south-eastern Australian rivers which indicate tolerance to a wide range of physio-logical conditions.

A 2012 study (Bower et al.) on salinisation impacts which included the Eastern long-necked turtle showed similar adaptations. Turtles were able to increase their urea concentration by up to six times, decreasing the osmotic gradient between the turtle's plasma and external environment and preventing water loss through osmosis. Haematocrit and total proteins were not affected by salinity as may be expected for the turtles who reduced food intake in these high saline conditions. This study also observed the Eastern long-neck turtle as the only species occurring natural at the site used for the saline treatment.

To summarise the Eastern long-neck turtle displays a range of behavioural and physiological adaptations to saline conditions. These adaptations were likely evolved to match the variety of conditions found throughout Australian waterways with this conclusion supported by the turtle's broad natural distribution.

3.0 Eastern Long-necked Turtle in Badgerys Creek

As part of the construction of the Western Sydney Airport Eastern long-necked turtles have been relocated to Badgerys Creek.

The aquatic habitat within Badgerys Creek as inspected during a field survey (Stantec 2023) was considered to be in fair condition given the context of the location and the level of background disturbance. The habitat present at all sites is considered Class 2, Type 2 Moderately Sensitive KFH (NSW DPI, 2013). Water quality was generally poor with elevated salinity and turbidity combined with low levels of dissolved oxygen (<60% all sites). Poor water quality was thought to be influencing the composition of the aquatic fauna community with very few native fish caught.

The area sampled is likely fair to poor habitat for the Eastern long-necked turtle however this conclusion is based on a single event of short duration that does not account for seasonal or other temporal variation.

3.1 MODELLED DISCHARGES TO BADGERYS CREEK

As part of the Western Sydney Airport works volumes of groundwater will be intercepted from within the project footprint, which will be mixed with clean process water and sent to a Water Treatment Plant (WTP) for treatment and removal of contaminants. The treated tunnel water (effluent) will then be discharged to Badgerys Creek (33°53'54.67S, 150°44'12.33E) via an enclosed pipe that culminates at the creek tie for the existing WSA Detention Basin DB3 spillway.

Discharges to Badgerys Creek will occur for approximately 15 months and will be of a higher salinity (3,238-8,648 mg/L), nitrogen and phosphorous than the receiving waters. 0.45 ML/day of treated effluent will be discharged in Badgerys Creek under an average discharge scenario, 0.57 ML/day will be discharged under the 'worst case' scenario. This effluent will mix with flows in Badgerys Creek. Median flows in the creek are 0.18 ML/day and 20th percentile flows 0.017 ML/day. Effluent will more than double flows within Badgerys Creek under all circumstances. The volume of effluent will be 33 times more than what is in the creek if the 'worst case' discharge scenario occurs during 20th percentile river flows.

Modelling data provided by CPBG indicates that salinity in Badgerys Creek will return to close to ambient conditions within a short distance [~50 meters (m)] of the discharge point. The model tested a range of scenarios across different flow condition and discharge concentrations (salinity, nitrogen, and phosphorus).

Reference: Badgerys Creek and the Eastern Long-necked Turtle

Under median flow rate conditions, a discharge of maximum salinity (8,648 mg/L) into receiving waters of 1058 mg/L was modelled a concentration of 1229 mg/L (16% increase) 50m downstream of the discharge point. Using the same parameters except under low flow conditions (20th percentile) a salinity concentration of 1287 mg/L (22% increase) was seen in the model 50m downstream of the discharge point. Closer to the discharge point under low flow condition, salinity was modelled to be 2888 mg/L at 20m (173% increase) and 4717 mg/L at 10m (345% increase).

Similar results were witnessed for nitrogen and phosphorous mixing. In a median flow scenario with maximum discharge concentrations; nitrogen returned to within 4% of ambient conditions at 50m and phosphorous within 2%. This relationship was similar for low flow (20th percentile) conditions.

Discharges to Badgerys Creek are not expected to impact the Eastern long-necked turtle. Modelling indicates that conditions return to like ambient within ~50 m. The Eastern long-necked turtle also shows behavioural and physiological tolerance to saline conditions and is highly mobile, able to move away from undesirable sites.

██████████
Aquatic Ecologist

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Phone: ██████████

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Reference: Badgerys Creek and the Eastern Long-necked Turtle

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Stantec 2023 Badgerys Creek Aquatic Ecology Tech Memo – May 2023

Annexure C Chromium and Zinc Dilution Multivariate Assessment



Multivariate model - Chromium VI

Worst-Case effluent discharge and average river flow

Chromium VI

Discharge rate 0.0066 m3/s Worst case effluent flow rate
River flow rate 0.0181 m3/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
Effluent water max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L

Discharge point

		Effluent Chromium VI (µg/L)																	
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	3	6	6	12	15	19	22	25	28	31	34	38	41	44	47	50	54	54
	0.3	3	6	6	12	16	19	22	25	28	31	35	38	41	44	47	51	54	54
	0.6	3	6	6	13	16	19	22	25	28	32	35	38	41	44	48	51	54	54
	0.8	3	6	6	13	16	19	22	25	29	32	35	38	41	45	48	51	54	54
	1.1	3	7	7	13	16	19	22	26	29	32	35	38	42	45	48	51	54	54
	1.3	4	7	7	13	16	19	23	26	29	32	35	39	42	45	48	51	54	54
	1.5	4	7	7	13	16	20	23	26	29	32	36	39	42	45	48	51	55	55
	1.8	4	7	7	14	17	20	23	26	29	33	36	39	42	45	48	52	55	55
	2.0	4	7	7	14	17	20	23	26	30	33	36	39	42	45	49	52	55	55
	2.3	4	8	8	14	17	20	23	27	30	33	36	39	42	46	49	52	55	55
	2.5	5	8	8	14	17	20	24	27	30	33	36	39	43	46	49	52	55	55
	2.8	5	8	8	14	17	21	24	27	30	33	36	40	43	46	49	52	55	55
	3.0	5	8	8	14	18	21	24	27	30	33	37	40	43	46	49	52	56	56
	3.2	5	8	8	15	18	21	24	27	30	34	37	40	43	46	49	53	56	56
	3.5	5	8	8	15	18	21	24	27	31	34	37	40	43	46	50	53	56	56
	3.7	5	9	9	15	18	21	24	28	31	34	37	40	43	47	50	53	56	56
	4.0	6	9	9	15	18	21	25	28	31	34	37	40	44	47	50	53	56	56
	4.2	6	9	9	15	18	22	25	28	31	34	37	41	44	47	50	53	57	57
	4.4	6	9	9	15	19	22	25	28	31	34	38	41	44	47	50	54	57	57
	4.7	6	9	9	16	19	22	25	28	31	35	38	41	44	47	51	54	57	57
	4.9	6	9	9	16	19	22	25	28	32	35	38	41	44	48	51	54	57	57
	5.2	6	10	10	16	19	22	25	29	32	35	38	41	45	48	51	54	57	57
	5.4	7	10	10	16	19	23	26	29	32	35	38	42	45	48	51	54	57	57
	5.7	7	10	10	16	20	23	26	29	32	35	39	42	45	48	51	54	58	58
	5.9	7	10	10	17	20	23	26	29	32	36	39	42	45	48	51	55	58	58
	6.1	7	10	10	17	20	23	26	29	33	36	39	42	45	48	52	55	58	58
	6.4	7	11	11	17	20	23	26	30	33	36	39	42	45	49	52	55	58	58
	6.6	8	11	11	17	20	23	27	30	33	36	39	42	46	49	52	55	58	58
	6.9	8	11	11	17	20	24	27	30	33	36	39	43	46	49	52	55	58	58
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	7.3	8	11	11	18	21	24	27	30	33	37	40	43	46	49	52	56	59	59
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	7.8	8	12	12	18	21	24	27	31	34	37	40	43	46	50	53	56	59	59
	8.1	9	12	12	18	21	24	28	31	34	37	40	43	47	50	53	56	59	59
	8.3	9	12	12	18	21	25	28	31	34	37	40	44	47	50	53	56	60	60
	8.6	9	12	12	18	22	25	28	31	34	37	41	44	47	50	53	57	60	60
	8.8	9	12	12	19	22	25	28	31	34	38	41	44	47	50	54	57	60	60
	9.0	9	12	12	19	22	25	28	32	35	38	41	44	47	51	54	57	60	60
	9.3	9	13	13	19	22	25	29	32	35	38	41	44	48	51	54	57	60	60
	9.5	10	13	13	19	22	26	29	32	35	38	41	45	48	51	54	57	60	60
	9.8	10	13	13	19	23	26	29	32	35	38	42	45	48	51	54	57	61	61
	10.0	10	13	13	20	23	26	29	32	35	39	42	45	48	51	54	58	61	61

Multivariate model - Chromium VI

Worst-Case effluent discharge and average river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
River flow rate 0.0181 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
min 10 µg/L
Effluent water
max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L
10m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	3	3	6	8	9	11	13	14	16	17	19	20	22	24	25	27	27
	0.3	2	3	3	6	8	10	11	13	14	16	17	19	21	22	24	25	27	27
	0.6	2	3	3	7	8	10	11	13	15	16	18	19	21	22	24	26	27	27
	0.8	2	4	4	7	8	10	12	13	15	16	18	20	21	23	24	26	27	27
	1.1	2	4	4	7	9	10	12	13	15	17	18	20	21	23	24	26	28	28
	1.3	2	4	4	7	9	10	12	14	15	17	18	20	22	23	25	26	28	28
	1.5	3	4	4	7	9	11	12	14	15	17	19	20	22	23	25	26	28	28
	1.8	3	4	4	8	9	11	12	14	16	17	19	20	22	24	25	27	28	28
	2.0	3	5	5	8	9	11	13	14	16	17	19	21	22	24	25	27	28	28
	2.3	3	5	5	8	10	11	13	14	16	18	19	21	22	24	26	27	29	29
	2.5	4	5	5	8	10	11	13	15	16	18	19	21	23	24	26	27	29	29
	2.8	4	5	5	8	10	12	13	15	16	18	20	21	23	24	26	28	29	29
	3.0	4	6	6	9	10	12	13	15	17	18	20	21	23	25	26	28	29	29
	3.2	4	6	6	9	10	12	14	15	17	18	20	22	23	25	26	28	30	30
	3.5	4	6	6	9	11	12	14	15	17	19	20	22	23	25	27	28	30	30
	3.7	5	6	6	9	11	12	14	16	17	19	20	22	24	25	27	28	30	30
	4.0	5	6	6	10	11	13	14	16	17	19	21	22	24	25	27	29	30	30
	4.2	5	7	7	10	11	13	14	16	18	19	21	22	24	26	27	29	30	30
	4.4	5	7	7	10	12	13	15	16	18	19	21	23	24	26	27	29	31	31
	4.7	5	7	7	10	12	13	15	17	18	20	21	23	24	26	28	29	31	31
	4.9	6	7	7	10	12	14	15	17	18	20	21	23	25	26	28	29	31	31
	5.2	6	7	7	11	12	14	15	17	19	20	22	23	25	26	28	30	31	31
	5.4	6	8	8	11	12	14	16	17	19	20	22	23	25	27	28	30	31	31
	5.7	6	8	8	11	13	14	16	17	19	21	22	24	25	27	28	30	32	32
	5.9	6	8	8	11	13	14	16	18	19	21	22	24	25	27	29	30	32	32
	6.1	7	8	8	11	13	15	16	18	19	21	23	24	26	27	29	30	32	32
	6.4	7	8	8	12	13	15	16	18	20	21	23	24	26	27	29	31	32	32
	6.6	7	9	9	12	13	15	17	18	20	21	23	25	26	28	29	31	32	32
	6.9	7	9	9	12	14	15	17	18	20	22	23	25	26	28	29	31	33	33
	7.1	7	9	9	12	14	15	17	19	20	22	23	25	27	28	30	31	33	33
	7.3	8	9	9	12	14	16	17	19	20	22	24	25	27	28	30	31	33	33
	7.6	8	9	9	13	14	16	17	19	21	22	24	25	27	29	30	32	33	33
	7.8	8	10	10	13	14	16	18	19	21	22	24	26	27	29	30	32	34	34
	8.1	8	10	10	13	15	16	18	19	21	23	24	26	27	29	31	32	34	34
	8.3	9	10	10	13	15	16	18	20	21	23	24	26	28	29	31	32	34	34
	8.6	9	10	10	14	15	17	18	20	21	23	25	26	28	29	31	33	34	34
	8.8	9	11	11	14	15	17	18	20	22	23	25	26	28	30	31	33	34	34
	9.0	9	11	11	14	16	17	19	20	22	23	25	27	28	30	31	33	35	35
	9.3	9	11	11	14	16	17	19	20	22	24	25	27	28	30	32	33	35	35
	9.5	10	11	11	14	16	18	19	21	22	24	25	27	29	30	32	33	35	35
	9.8	10	11	11	15	16	18	19	21	22	24	26	27	29	30	32	34	35	35
	10.0	10	12	12	15	16	18	20	21	23	24	26	27	29	31	32	34	35	35

Multivariate model - Chromium VI

Worst-Case effluent discharge and average river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
River flow rate 0.0181 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
min 10 µg/L
Effluent water
max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L
20m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	2	2	3	4	5	6	6	7	8	9	9	10	11	12	13	13	13
	0.3	1	2	2	3	4	5	6	7	7	8	9	10	11	11	12	13	13	14
	0.6	1	2	2	4	4	5	6	7	8	8	9	10	11	12	12	13	13	14
	0.8	1	2	2	4	5	5	6	7	8	9	9	10	11	12	13	13	13	14
	1.1	2	2	2	4	5	6	6	7	8	9	10	10	11	12	13	14	14	14
	1.3	2	3	3	4	5	6	7	7	8	9	10	11	11	12	13	14	15	15
	1.5	2	3	3	4	5	6	7	8	8	9	10	11	12	12	13	14	15	15
	1.8	2	3	3	5	6	6	7	8	9	9	10	11	12	13	13	14	15	15
	2.0	3	3	3	5	6	7	7	8	9	10	10	11	12	13	14	14	15	15
	2.3	3	4	4	5	6	7	8	8	9	10	11	12	12	13	14	15	15	15
	2.5	3	4	4	5	6	7	8	9	9	10	11	12	13	13	14	15	15	16
	2.8	3	4	4	6	6	7	8	9	10	10	11	12	13	14	14	15	16	16
	3.0	3	4	4	6	7	7	8	9	10	11	11	12	13	14	15	15	15	16
	3.2	4	4	4	6	7	8	8	9	10	11	12	12	13	14	15	16	16	16
	3.5	4	5	5	6	7	8	9	9	10	11	12	13	13	14	15	16	17	17
	3.7	4	5	5	7	7	8	9	10	10	11	12	13	14	14	15	16	17	17
	4.0	4	5	5	7	8	8	9	10	11	12	12	13	14	15	15	16	17	17
	4.2	5	5	5	7	8	9	9	10	11	12	13	13	14	15	16	16	17	17
	4.4	5	6	6	7	8	9	10	10	11	12	13	14	14	15	16	17	18	18
	4.7	5	6	6	7	8	9	10	11	11	12	13	14	15	15	16	17	18	18
	4.9	5	6	6	8	8	9	10	11	12	12	13	14	15	16	16	17	18	18
	5.2	5	6	6	8	9	9	10	11	12	13	13	14	15	16	17	17	18	18
	5.4	6	7	7	8	9	10	10	11	12	13	14	14	15	16	17	18	18	18
	5.7	6	7	7	8	9	10	11	11	12	13	14	15	15	16	17	18	19	19
	5.9	6	7	7	9	9	10	11	12	13	13	14	15	16	16	17	18	19	19
	6.1	6	7	7	9	10	10	11	12	13	14	14	15	16	17	18	18	19	19
	6.4	7	7	7	9	10	11	11	12	13	14	15	15	16	17	18	19	19	19
	6.6	7	8	8	9	10	11	12	12	13	14	15	16	16	17	18	19	20	20
	6.9	7	8	8	9	10	11	12	13	13	14	15	16	17	17	18	19	20	20
	7.1	7	8	8	10	10	11	12	13	14	14	15	16	17	18	18	19	20	20
	7.3	8	8	8	10	11	11	12	13	14	15	15	16	17	18	19	19	20	20
	7.6	8	9	9	10	11	12	13	13	14	15	16	16	17	18	19	20	20	20
	7.8	8	9	9	10	11	12	13	14	14	15	16	17	17	18	19	20	21	21
	8.1	8	9	9	11	11	12	13	14	15	15	16	17	18	19	19	20	21	21
	8.3	8	9	9	11	12	12	13	14	15	16	16	17	18	19	20	20	21	21
	8.6	9	9	9	11	12	13	13	14	15	16	17	17	18	19	20	21	21	21
	8.8	9	10	10	11	12	13	14	14	15	16	17	18	18	19	20	21	22	22
	9.0	9	10	10	11	12	13	14	15	15	16	17	18	19	19	20	21	22	22
	9.3	9	10	10	12	12	13	14	15	16	16	17	18	19	20	20	21	22	22
	9.5	10	10	10	12	13	14	14	15	16	17	17	18	19	20	21	21	22	22
	9.8	10	11	11	12	13	14	15	15	16	17	18	19	19	20	21	22	22	22
	10.0	10	11	11	12	13	14	15	16	16	17	18	19	20	20	21	22	22	23

Multivariate model - Chromium VI

Worst-Case effluent discharge and average river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0181 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 30m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	0	1	1	2	2	2	2	3	3	4	4	4	5	5	6	6	6	7
	0.3	1	1	1	2	2	2	3	3	3	4	4	4	5	5	6	6	7	7
	0.6	1	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7
	0.8	1	2	2	2	3	3	4	4	4	4	5	5	5	6	6	7	7	7
	1.1	1	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	7	8
	1.3	2	2	2	3	3	4	4	4	5	5	5	6	6	6	7	7	8	8
	1.5	2	2	2	3	3	4	4	5	5	5	6	6	6	7	7	7	8	8
	1.8	2	2	2	3	4	4	4	5	5	6	6	6	6	7	7	8	8	8
	2.0	2	3	3	3	4	4	5	5	5	6	6	6	7	7	7	8	8	9
	2.3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	9
	2.5	3	3	3	4	4	5	5	6	6	6	6	7	7	8	8	8	9	9
	2.8	3	3	3	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9
	3.0	3	4	4	4	5	5	6	6	6	7	7	8	8	8	8	9	9	10
	3.2	3	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9	10
	3.5	4	4	4	5	5	6	6	6	7	7	7	8	8	8	9	9	10	10
	3.7	4	4	4	5	6	6	6	7	7	8	8	8	8	9	9	9	10	10
	4.0	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9	10	10	11
	4.2	4	5	5	6	6	6	7	7	8	8	8	8	9	9	10	10	10	11
	4.4	5	5	5	6	6	7	7	7	8	8	8	8	9	9	10	10	11	11
	4.7	5	5	5	6	6	7	7	8	8	8	8	9	9	10	10	10	11	11
	4.9	5	5	5	6	7	7	7	8	8	8	9	9	9	10	10	11	11	11
	5.2	5	6	6	7	7	7	8	8	9	9	9	9	10	10	10	11	11	12
	5.4	6	6	6	7	7	8	8	8	9	9	9	10	10	10	11	11	12	12
	5.7	6	6	6	7	7	8	8	8	9	9	9	10	10	11	11	11	12	12
	5.9	6	6	6	7	8	8	8	8	9	9	10	10	10	11	11	12	12	12
	6.1	6	7	7	7	8	8	8	9	9	9	10	10	11	11	11	12	12	13
	6.4	6	7	7	8	8	8	8	9	9	10	10	10	11	11	12	12	12	13
	6.6	7	7	7	8	8	9	9	10	10	10	10	11	11	11	12	12	13	13
	6.9	7	7	7	8	9	9	9	10	10	11	11	11	11	12	12	13	13	13
	7.1	7	8	8	8	9	9	10	10	10	11	11	11	12	12	12	13	13	14
	7.3	7	8	8	9	9	9	10	10	11	11	11	11	12	12	13	13	13	14
	7.6	8	8	8	9	9	10	10	10	11	11	11	12	12	12	13	13	14	14
	7.8	8	8	8	9	9	10	10	10	11	11	11	12	12	13	13	13	14	14
	8.1	8	9	9	9	10	10	11	11	11	11	12	12	12	13	13	14	14	14
	8.3	8	9	9	10	10	10	11	11	11	12	12	12	13	13	14	14	14	15
	8.6	9	9	9	10	10	11	11	11	11	12	12	13	13	13	14	14	15	15
	8.8	9	9	9	10	10	11	11	11	12	12	12	13	13	14	14	14	15	15
	9.0	9	9	9	10	11	11	11	11	12	12	13	13	13	14	14	15	15	15
	9.3	9	10	10	10	11	11	11	12	12	12	13	13	14	14	14	15	15	16
	9.5	10	10	10	11	11	12	12	12	13	13	13	13	14	14	15	15	15	16
	9.8	10	10	10	11	11	12	12	12	13	13	13	14	14	15	15	15	16	16
	10.0	10	10	10	11	12	12	12	13	13	14	14	14	14	15	15	16	16	16

Multivariate model - Chromium VI

Worst-Case effluent discharge and average river flow

Chromium VI

Discharge rate	0.0066 m ³ /s	Worst case effluent flow rate
River flow rate	0.0181 m ³ /s	Average flow rate

Key

9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water

min 10 µg/L

Effluent water

max 200 µg/L

Receiving min 0.1 µg/L

Receiving max 10 µg/L

40m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	0	0	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3
	0.3	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4
	0.6	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4
	0.8	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4
	1.1	1	1	1	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4
	1.3	1	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	5
	1.5	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5
	1.8	2	2	2	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5
	2.0	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5
	2.3	2	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	6
	2.5	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	6	6
	2.8	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6
	3.0	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6
	3.2	3	4	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6	7
	3.5	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	7	7
	3.7	4	4	4	4	5	5	5	5	5	6	6	6	6	6	6	7	7	7
	4.0	4	4	4	5	5	5	5	5	6	6	6	6	6	6	7	7	7	7
	4.2	4	4	4	5	5	5	5	6	6	6	6	6	6	7	7	7	7	7
	4.4	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	8	8
	4.7	5	5	5	5	6	6	6	6	6	6	7	7	7	7	7	8	8	8
	4.9	5	5	5	6	6	6	6	6	7	7	7	7	7	8	8	8	8	8
	5.2	5	5	5	6	6	6	6	7	7	7	7	7	7	8	8	8	8	8
	5.4	5	6	6	6	6	6	7	7	7	7	7	7	8	8	8	8	8	9
	5.7	6	6	6	6	7	7	7	7	7	8	8	8	8	8	8	9	9	9
	5.9	6	6	6	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9
	6.1	6	6	6	7	7	7	7	8	8	8	8	8	8	9	9	9	9	9
	6.4	6	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9	9	10
	6.6	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9	9	10	10
	6.9	7	7	7	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10
	7.1	7	7	7	8	8	8	8	8	9	9	9	9	9	10	10	10	10	10
	7.3	7	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11
	7.6	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11	11
	7.8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11	11	11
	8.1	8	8	8	9	9	9	9	9	10	10	10	10	10	10	11	11	11	11
	8.3	8	9	9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12
	8.6	9	9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12	12
	8.8	9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12	12	12
	9.0	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12	12	12	12
	9.3	9	9	9	10	10	10	10	10	11	11	11	11	11	12	12	12	12	12
	9.5	10	10	10	10	10	11	11	11	11	11	11	12	12	12	12	12	12	13
	9.8	10	10	10	10	11	11	11	11	11	11	12	12	12	12	12	13	13	13
	10.0	10	10	10	11	11	11	11	11	11	12	12	12	12	12	13	13	13	13

Multivariate model - Chromium VI

Average effluent discharge and average river flow

Chromium VI		
Discharge rate	0.0053 m3/s	Average effluent flow rate
River flow rate	0.018 m3/s	Average flow rate

Key	
9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min	10 µg/L
Effluent water max	200 µg/L
Receiving min	0.1 µg/L
Receiving max	10 µg/L

Discharge point																			
		Effluent Chromium VI (µg/L)																	
	0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	2	5	5	10	13	16	18	21	24	26	29	32	35	37	40	43	45	
	0.3	3	5	5	11	13	16	19	21	24	27	29	32	35	37	40	43	45	
	0.6	3	5	5	11	13	16	19	21	24	27	30	32	35	38	40	43	46	
	0.8	3	6	6	11	14	16	19	22	24	27	30	32	35	38	40	43	46	
	1.1	3	6	6	11	14	16	19	22	25	27	30	33	35	38	41	43	46	
	1.3	3	6	6	11	14	17	19	22	25	27	30	33	35	38	41	43	46	
	1.5	3	6	6	12	14	17	20	22	25	28	30	33	36	38	41	44	46	
	1.8	4	6	6	12	14	17	20	22	25	28	30	33	36	39	41	44	47	
	2.0	4	7	7	12	15	17	20	23	25	28	31	33	36	39	41	44	47	
	2.3	4	7	7	12	15	17	20	23	25	28	31	34	36	39	42	44	47	
	2.5	4	7	7	12	15	18	20	23	26	28	31	34	36	39	42	44	47	
	2.8	4	7	7	12	15	18	20	23	26	29	31	34	37	39	42	45	47	
	3.0	5	7	7	13	15	18	21	23	26	29	31	34	37	39	42	45	47	
	3.2	5	7	7	13	15	18	21	24	26	29	32	34	37	40	42	45	48	
	3.5	5	8	8	13	16	18	21	24	26	29	32	34	37	40	42	45	48	
	3.7	5	8	8	13	16	19	21	24	27	29	32	35	37	40	43	45	48	
	4.0	5	8	8	13	16	19	21	24	27	29	32	35	38	40	43	46	48	
	4.2	6	8	8	14	16	19	22	24	27	30	32	35	38	40	43	46	48	
	4.4	6	8	8	14	16	19	22	24	27	30	33	35	38	41	43	46	49	
	4.7	6	9	9	14	17	19	22	25	27	30	33	35	38	41	43	46	49	
	4.9	6	9	9	14	17	19	22	25	28	30	33	36	38	41	44	46	49	
	5.2	6	9	9	14	17	20	22	25	28	30	33	36	38	41	44	46	49	
	5.4	6	9	9	14	17	20	23	25	28	31	33	36	39	41	44	47	49	
	5.7	7	9	9	15	17	20	23	25	28	31	33	36	39	41	44	47	50	
	5.9	7	10	10	15	18	20	23	26	28	31	34	36	39	42	44	47	50	
	6.1	7	10	10	15	18	20	23	26	28	31	34	37	39	42	45	47	50	
	6.4	7	10	10	15	18	21	23	26	29	31	34	37	39	42	45	47	50	
	6.6	7	10	10	15	18	21	23	26	29	32	34	37	40	42	45	48	50	
	6.9	8	10	10	16	18	21	24	26	29	32	34	37	40	42	45	48	50	
	7.1	8	10	10	16	18	21	24	27	29	32	35	37	40	43	45	48	51	
	7.3	8	11	11	16	19	21	24	27	29	32	35	37	40	43	45	48	51	
	7.6	8	11	11	16	19	22	24	27	30	32	35	38	40	43	46	48	51	
	7.8	8	11	11	16	19	22	24	27	30	32	35	38	40	43	46	49	51	
8.1	9	11	11	17	19	22	25	27	30	33	35	38	41	43	46	49	51		
8.3	9	11	11	17	19	22	25	27	30	33	36	38	41	44	46	49	52		
8.6	9	12	12	17	20	22	25	28	30	33	36	38	41	44	46	49	52		
8.8	9	12	12	17	20	22	25	28	31	33	36	39	41	44	47	49	52		
9.0	9	12	12	17	20	23	25	28	31	33	36	39	41	44	47	49	52		
9.3	9	12	12	17	20	23	26	28	31	34	36	39	42	44	47	50	52		
9.5	10	12	12	18	20	23	26	28	31	34	36	39	42	44	47	50	53		
9.8	10	12	12	18	21	23	26	29	31	34	37	39	42	45	47	50	53		
10.0	10	13	13	18	21	23	26	29	31	34	37	39	42	45	48	50	53		

Multivariate model - Chromium VI

Average effluent discharge and average river flow

Chromium VI

Discharge rate 0.0053 m³/s Average effluent flow rate
 River flow rate 0.018 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 10m

		Effluent Chromium VI (µg/L)																		
0		10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0		
Receiving Water Chromium VI (µg/L)	0.1	1	3	3	5	7	8	9	11	12	13	15	16	17	19	20	21	23		
	0.3	1	3	3	5	7	8	9	11	12	13	15	16	18	19	20	22	23		
	0.6	2	3	3	6	7	8	10	11	12	14	15	16	18	19	20	22	23		
	0.8	2	3	3	6	7	9	10	11	13	14	15	17	18	19	21	22	23		
	1.1	2	3	3	6	7	9	10	11	13	14	15	17	18	20	21	22	24		
	1.3	2	4	4	6	8	9	10	12	13	14	16	17	18	20	21	22	24		
	1.5	3	4	4	7	8	9	11	12	13	15	16	17	19	20	21	23	24		
	1.8	3	4	4	7	8	9	11	12	13	15	16	17	19	20	21	23	24		
	2.0	3	4	4	7	8	10	11	12	14	15	16	18	19	20	22	23	24		
	2.3	3	4	4	7	9	10	11	13	14	15	17	18	19	21	22	23	25		
	2.5	3	5	5	7	9	10	11	13	14	15	17	18	19	21	22	23	25		
	2.8	4	5	5	8	9	10	12	13	14	16	17	18	20	21	22	24	25		
	3.0	4	5	5	8	9	10	12	13	15	16	17	19	20	21	23	24	25		
	3.2	4	5	5	8	9	11	12	13	15	16	17	19	20	21	23	24	25		
	3.5	4	6	6	8	10	11	12	14	15	16	18	19	20	22	23	24	26		
	3.7	4	6	6	8	10	11	12	14	15	16	18	19	21	22	23	25	26		
	4.0	5	6	6	9	10	11	13	14	15	17	18	19	21	22	23	25	26		
	4.2	5	6	6	9	10	12	13	14	16	17	18	20	21	22	24	25	26		
	4.4	5	6	6	9	10	12	13	14	16	17	18	20	21	23	24	25	27		
	4.7	5	7	7	9	11	12	13	15	16	17	19	20	21	23	24	25	27		
	4.9	6	7	7	10	11	12	14	15	16	18	19	20	22	23	24	26	27		
	5.2	6	7	7	10	11	12	14	15	16	18	19	20	22	23	24	26	27		
	5.4	6	7	7	10	11	13	14	15	17	18	19	21	22	23	25	26	27		
	5.7	6	7	7	10	12	13	14	16	17	18	20	21	22	24	25	26	28		
	5.9	6	8	8	10	12	13	14	16	17	18	20	21	22	24	25	26	28		
	6.1	7	8	8	11	12	13	15	16	17	19	20	21	23	24	25	27	28		
	6.4	7	8	8	11	12	13	15	16	18	19	20	22	23	24	26	27	28		
	6.6	7	8	8	11	12	14	15	16	18	19	20	22	23	24	26	27	28		
	6.9	7	9	9	11	13	14	15	17	18	19	21	22	23	25	26	27	29		
	7.1	7	9	9	11	13	14	15	17	18	19	21	22	24	25	26	28	29		
	7.3	8	9	9	12	13	14	16	17	18	20	21	22	24	25	26	28	29		
	7.6	8	9	9	12	13	15	16	17	19	20	21	23	24	25	27	28	29		
	7.8	8	9	9	12	13	15	16	17	19	20	21	23	24	26	27	28	30		
	8.1	8	10	10	12	14	15	16	18	19	20	22	23	24	26	27	28	30		
	8.3	9	10	10	13	14	15	17	18	19	21	22	23	25	26	27	29	30		
	8.6	9	10	10	13	14	15	17	18	19	21	22	23	25	26	27	29	30		
	8.8	9	10	10	13	14	16	17	18	20	21	22	24	25	26	28	29	30		
	9.0	9	10	10	13	15	16	17	19	20	21	23	24	25	27	28	29	31		
	9.3	9	11	11	13	15	16	17	19	20	21	23	24	25	27	28	29	31		
	9.5	10	11	11	14	15	16	18	19	20	22	23	24	26	27	28	30	31		
	9.8	10	11	11	14	15	16	18	19	21	22	23	25	26	27	29	30	31		
	10.0	10	11	11	14	15	17	18	19	21	22	23	25	26	27	29	30	31		

Multivariate model - Chromium VI

Average effluent discharge and average river flow

Chromium VI

Discharge rate 0.0053 m³/s Average effluent flow rate
 River flow rate 0.018 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 20m

		Effluent Chromium VI (µg/L)																		
0		10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0		
Receiving Water Chromium VI (µg/L)	0.1	1	1	1	3	3	4	5	5	6	7	7	8	8	9	9	10	11	11	
	0.3	1	2	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	
	0.6	1	2	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	
	0.8	1	2	2	3	4	5	5	6	7	7	8	9	9	10	11	11	12	12	
	1.1	2	2	2	4	4	5	6	6	7	8	8	9	10	10	11	12	12	12	
	1.3	2	2	2	4	4	5	6	6	7	8	9	9	10	11	11	12	13	13	
	1.5	2	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	
	1.8	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	12	13	13	
	2.0	2	3	3	4	5	6	7	7	8	9	9	10	11	11	12	13	13	13	
	2.3	3	3	3	5	5	6	7	7	8	9	9	10	11	11	12	13	13	13	
	2.5	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	13	14	14	
	2.8	3	4	4	5	6	7	7	8	9	9	10	11	11	12	13	13	14	14	
	3.0	3	4	4	5	6	7	7	8	9	9	10	11	11	12	13	13	14	14	
	3.2	4	4	4	6	6	7	8	8	9	10	10	11	12	12	13	14	14	14	
	3.5	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15	
	3.7	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15	
	4.0	4	5	5	6	7	8	8	9	10	10	11	12	12	13	14	14	15	15	
	4.2	5	5	5	7	7	8	9	9	10	11	11	12	13	13	14	15	15	15	
	4.4	5	5	5	7	7	8	9	9	10	11	11	12	13	13	14	15	15	15	
	4.7	5	6	6	7	8	8	9	10	10	11	12	12	13	14	14	15	16	16	
	4.9	5	6	6	7	8	9	9	10	11	11	12	13	13	14	15	15	16	16	
	5.2	5	6	6	7	8	9	9	10	11	11	12	13	13	14	15	15	16	16	
	5.4	6	6	6	8	8	9	10	10	11	12	12	13	14	14	15	16	16	16	
	5.7	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15	16	17	17	
	5.9	6	7	7	8	9	9	10	11	11	12	13	14	14	15	16	16	17	17	
	6.1	6	7	7	8	9	10	10	11	12	12	13	14	14	15	16	16	17	17	
	6.4	7	7	7	9	9	10	11	11	12	13	13	14	15	15	16	17	17	17	
	6.6	7	7	7	9	9	10	11	12	12	13	14	14	15	16	16	17	18	18	
	6.9	7	8	8	9	10	10	11	12	12	13	14	14	15	16	16	17	18	18	
	7.1	7	8	8	9	10	11	11	12	13	13	14	15	15	16	17	17	18	18	
	7.3	7	8	8	10	10	11	12	12	13	14	14	15	16	16	17	18	18	18	
	7.6	8	8	8	10	10	11	12	12	13	14	14	15	16	16	17	18	18	18	
7.8	8	9	9	10	11	11	12	13	13	14	15	15	16	17	17	18	19	19		
8.1	8	9	9	10	11	12	12	13	14	14	15	16	16	17	18	18	19	19		
8.3	8	9	9	10	11	12	12	13	14	14	15	16	16	17	18	18	19	19		
8.6	9	9	9	11	11	12	13	13	14	15	15	16	17	17	18	19	19	19		
8.8	9	10	10	11	12	12	13	14	14	15	16	16	17	18	18	19	20	20		
9.0	9	10	10	11	12	12	13	14	14	15	16	16	17	18	18	19	20	20		
9.3	9	10	10	11	12	13	13	14	15	15	16	17	17	18	19	19	20	20		
9.5	10	10	10	12	12	13	14	14	15	16	16	17	18	18	19	20	20	20		
9.8	10	10	10	12	12	13	14	14	15	16	16	17	18	18	19	20	20	20		
10.0	10	11	11	12	13	13	14	15	15	16	17	17	18	19	19	20	21	21		

Multivariate model - Chromium VI

Average effluent discharge and average river flow

Chromium VI

Discharge rate 0.0053 m³/s Average effluent flow rate
 River flow rate 0.018 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 30m

		Effluent Chromium VI (µg/L)																		
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	0	1	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	6	
	0.3	1	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	6	6	
	0.6	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	
	0.8	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	
	1.1	1	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6	6	7	
	1.3	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	
	1.5	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	
	1.8	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	
	2.0	2	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	7	8	
	2.3	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	
	2.5	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	7	8	8	
	2.8	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	
	3.0	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	9	
	3.2	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	9	
	3.5	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	9	9	
	3.7	4	4	4	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	
	4.0	4	4	4	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	
	4.2	4	5	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	10	
	4.4	5	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	10	10	
	4.7	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	
	4.9	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	
	5.2	5	6	6	6	7	7	7	7	8	8	8	9	9	9	10	10	10	11	
	5.4	6	6	6	7	7	7	7	8	8	8	9	9	9	10	10	10	11	11	
	5.7	6	6	6	7	7	7	7	8	8	8	9	9	9	10	10	10	11	11	
	5.9	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	
	6.1	6	7	7	7	8	8	8	8	9	9	9	10	10	10	11	11	11	12	
	6.4	6	7	7	7	8	8	8	8	9	9	9	10	10	11	11	11	12	12	
	6.6	7	7	7	8	8	8	8	9	9	9	10	10	10	11	11	11	12	12	
	6.9	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12	12	
	7.1	7	8	8	8	9	9	9	9	10	10	10	11	11	11	12	12	12	13	
	7.3	7	8	8	8	9	9	9	9	10	10	10	11	11	11	12	12	12	13	
	7.6	8	8	8	9	9	9	9	10	10	10	11	11	11	12	12	12	13	13	
7.8	8	8	8	9	9	10	10	10	10	11	11	11	12	12	12	13	13	13		
8.1	8	8	8	9	9	10	10	10	10	11	11	11	12	12	12	13	13	13		
8.3	8	9	9	9	10	10	10	10	11	11	11	12	12	12	13	13	13	14		
8.6	9	9	9	10	10	10	11	11	11	12	12	12	13	13	13	14	14	14		
8.8	9	9	9	10	10	11	11	11	11	12	12	12	13	13	13	14	14	14		
9.0	9	9	9	10	10	11	11	11	11	12	12	12	13	13	13	14	14	14		
9.3	9	10	10	10	11	11	11	11	12	12	12	13	13	13	14	14	14	15		
9.5	10	10	10	11	11	11	12	12	12	12	13	13	13	14	14	14	15	15		
9.8	10	10	10	11	11	11	12	12	12	13	13	13	14	14	14	15	15	15		
10.0	10	10	10	11	11	12	12	12	12	13	13	13	14	14	14	15	15	15		

Multivariate model - Chromium VI

Average effluent discharge and average river flow

Chromium VI

Discharge rate	0.0053 m ³ /s	Average effluent flow rate
River flow rate	0.018 m ³ /s	Average flow rate

Key

9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min	10 µg/L
Effluent water max	200 µg/L
Receiving min	0.1 µg/L
Receiving max	10 µg/L

40m

		Effluent Chromium VI (µg/L)																	
0		10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	0	0	0	1	1	1	1	1	2	2	2	2	2	2	3	3	3	
	0.3	0	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	
	0.6	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	
	0.8	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	
	1.1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	4	4	
	1.3	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	
	1.5	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	
	1.8	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	
	2.0	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	
	2.3	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	
	2.5	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	
	2.8	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	6	
	3.0	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	6	6	
	3.2	3	4	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	
	3.5	4	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	
	3.7	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	6	
	4.0	4	4	4	5	5	5	5	5	5	6	6	6	6	6	6	7	7	
	4.2	4	4	4	5	5	5	5	5	6	6	6	6	6	6	7	7	7	
	4.4	5	5	5	5	5	5	6	6	6	6	6	6	7	7	7	7	7	
	4.7	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	
	4.9	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	8	8	
	5.2	5	5	5	6	6	6	6	6	7	7	7	7	7	7	8	8	8	
	5.4	5	6	6	6	6	6	6	6	7	7	7	7	7	8	8	8	8	
	5.7	6	6	6	6	6	7	7	7	7	7	7	8	8	8	8	8	8	
	5.9	6	6	6	6	7	7	7	7	7	7	8	8	8	8	8	8	9	
	6.1	6	6	6	7	7	7	7	7	8	8	8	8	8	8	9	9	9	
	6.4	6	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9	
	6.6	7	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	
	6.9	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	10	
	7.1	7	7	7	8	8	8	8	8	8	9	9	9	9	9	9	10	10	
	7.3	7	8	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	
	7.6	8	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	
7.8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11		
8.1	8	8	8	9	9	9	9	9	9	9	10	10	10	10	10	10	11		
8.3	8	9	9	9	9	9	9	9	10	10	10	10	10	10	11	11	11		
8.6	9	9	9	9	9	9	10	10	10	10	10	10	10	11	11	11	11		
8.8	9	9	9	9	9	10	10	10	10	10	10	10	11	11	11	11	11		
9.0	9	9	9	10	10	10	10	10	10	10	11	11	11	11	11	12	12		
9.3	9	9	9	10	10	10	10	10	10	11	11	11	11	11	11	12	12		
9.5	10	10	10	10	10	10	11	11	11	11	11	11	11	12	12	12	12		
9.8	10	10	10	10	10	11	11	11	11	11	11	11	12	12	12	12	12		
10.0	10	10	10	11	11	11	11	11	11	11	12	12	12	12	12	12	13		

Multivariate model - Chromium VI

Worst-case effluent discharge and median river flow

Chromium VI		
Discharge rate	0.0066 m3/s	Worst case effluent flow rate
River flow rate	0.0072 m3/s	Median

Key	
9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water	
min	10 µg/L
Effluent water	
max	200 µg/L
Receiving min	0.1 µg/L
Receiving max	10 µg/L

Discharge point

		Effluent Chromium VI (µg/L)																	
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	5	11	11	22	28	33	39	45	50	56	62	67	73	79	84	90	96	
	0.3	5	11	11	22	28	33	39	45	50	56	62	67	73	79	84	90	96	
	0.6	5	11	11	22	28	33	39	45	51	56	62	68	73	79	85	90	96	
	0.8	5	11	11	22	28	34	39	45	51	56	62	68	73	79	85	90	96	
	1.1	5	11	11	22	28	34	39	45	51	56	62	68	73	79	85	91	96	
	1.3	5	11	11	23	28	34	40	45	51	57	62	68	74	79	85	91	96	
	1.5	6	11	11	23	28	34	40	45	51	57	62	68	74	79	85	91	96	
	1.8	6	11	11	23	28	34	40	45	51	57	63	68	74	80	85	91	97	
	2.0	6	12	12	23	29	34	40	46	51	57	63	68	74	80	85	91	97	
	2.3	6	12	12	23	29	34	40	46	51	57	63	68	74	80	85	91	97	
	2.5	6	12	12	23	29	34	40	46	52	57	63	69	74	80	86	91	97	
	2.8	6	12	12	23	29	35	40	46	52	57	63	69	74	80	86	91	97	
	3.0	6	12	12	23	29	35	40	46	52	57	63	69	74	80	86	92	97	
	3.2	6	12	12	24	29	35	41	46	52	58	63	69	75	80	86	92	97	
	3.5	7	12	12	24	29	35	41	46	52	58	63	69	75	80	86	92	97	
	3.7	7	12	12	24	29	35	41	46	52	58	64	69	75	81	86	92	98	
	4.0	7	13	13	24	30	35	41	47	52	58	64	69	75	81	86	92	98	
	4.2	7	13	13	24	30	35	41	47	52	58	64	69	75	81	86	92	98	
	4.4	7	13	13	24	30	35	41	47	53	58	64	70	75	81	87	92	98	
	4.7	7	13	13	24	30	36	41	47	53	58	64	70	75	81	87	92	98	
	4.9	7	13	13	24	30	36	41	47	53	58	64	70	76	81	87	93	98	
	5.2	7	13	13	25	30	36	42	47	53	59	64	70	76	81	87	93	98	
	5.4	8	13	13	25	30	36	42	47	53	59	64	70	76	81	87	93	98	
	5.7	8	13	13	25	30	36	42	47	53	59	65	70	76	82	87	93	99	
	5.9	8	14	14	25	31	36	42	48	53	59	65	70	76	82	87	93	99	
	6.1	8	14	14	25	31	36	42	48	53	59	65	70	76	82	87	93	99	
	6.4	8	14	14	25	31	37	42	48	54	59	65	71	76	82	88	93	99	
	6.6	8	14	14	25	31	37	42	48	54	59	65	71	76	82	88	93	99	
	6.9	8	14	14	25	31	37	42	48	54	59	65	71	77	82	88	94	99	
	7.1	8	14	14	26	31	37	43	48	54	60	65	71	77	82	88	94	99	
	7.3	9	14	14	26	31	37	43	48	54	60	65	71	77	82	88	94	99	
	7.6	9	14	14	26	31	37	43	48	54	60	66	71	77	83	88	94	100	
	7.8	9	15	15	26	32	37	43	49	54	60	66	71	77	83	88	94	100	
	8.1	9	15	15	26	32	37	43	49	54	60	66	71	77	83	89	94	100	
	8.3	9	15	15	26	32	38	43	49	55	60	66	72	77	83	89	94	100	
	8.6	9	15	15	26	32	38	43	49	55	60	66	72	77	83	89	94	100	
	8.8	9	15	15	26	32	38	43	49	55	60	66	72	78	83	89	95	100	
	9.0	9	15	15	27	32	38	44	49	55	61	66	72	78	83	89	95	100	
	9.3	10	15	15	27	32	38	44	49	55	61	66	72	78	83	89	95	100	
	9.5	10	15	15	27	32	38	44	50	55	61	67	72	78	84	89	95	101	
	9.8	10	16	16	27	33	38	44	50	55	61	67	72	78	84	89	95	101	
	10.0	10	16	16	27	33	38	44	50	55	61	67	72	78	84	90	95	101	

Multivariate model - Chromium VI

Worst-case effluent discharge and median river flow

Chromium VI			Key	
Discharge rate	0.0066 m3/s	Worst case effluent flow rate Median	9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
River flow rate	0.0072 m3/s		9.99	Concentrations above the AEPR freshwater limit (10 µg/L)
Effluent water				
min	10 µg/L			
Effluent water max	200 µg/L			
Receiving min	0.1 µg/L			
Receiving max	10 µg/L			
10m				

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1		2	5	5	11	14	17	20	22	25	28	31	34	37	39	42	45	48
	0.3		3	5	5	11	14	17	20	23	25	28	31	34	37	40	42	45	48
	0.6		3	6	6	11	14	17	20	23	26	28	31	34	37	40	43	45	48
	0.8		3	6	6	12	14	17	20	23	26	29	31	34	37	40	43	46	49
	1.1		3	6	6	12	15	17	20	23	26	29	32	34	37	40	43	46	49
	1.3		3	6	6	12	15	18	20	23	26	29	32	35	37	40	43	46	49
	1.5		4	6	6	12	15	18	21	23	26	29	32	35	38	40	43	46	49
	1.8		4	7	7	12	15	18	21	24	26	29	32	35	38	41	44	46	49
	2.0		4	7	7	12	15	18	21	24	27	29	32	35	38	41	44	47	49
	2.3		4	7	7	13	15	18	21	24	27	30	33	35	38	41	44	47	50
	2.5		4	7	7	13	16	19	21	24	27	30	33	36	38	41	44	47	50
	2.8		4	7	7	13	16	19	22	24	27	30	33	36	39	41	44	47	50
	3.0		5	8	8	13	16	19	22	25	27	30	33	36	39	42	44	47	50
	3.2		5	8	8	13	16	19	22	25	28	30	33	36	39	42	45	47	50
	3.5		5	8	8	14	16	19	22	25	28	31	33	36	39	42	45	48	50
	3.7		5	8	8	14	17	19	22	25	28	31	34	36	39	42	45	48	51
	4.0		5	8	8	14	17	20	22	25	28	31	34	37	39	42	45	48	51
	4.2		6	8	8	14	17	20	23	25	28	31	34	37	40	43	45	48	51
	4.4		6	9	9	14	17	20	23	26	28	31	34	37	40	43	46	48	51
	4.7		6	9	9	14	17	20	23	26	29	32	34	37	40	43	46	49	51
	4.9		6	9	9	15	18	20	23	26	29	32	35	37	40	43	46	49	52
	5.2		6	9	9	15	18	21	23	26	29	32	35	38	40	43	46	49	52
	5.4		7	9	9	15	18	21	24	26	29	32	35	38	41	43	46	49	52
	5.7		7	10	10	15	18	21	24	27	29	32	35	38	41	44	46	49	52
	5.9		7	10	10	15	18	21	24	27	30	32	35	38	41	44	47	49	52
	6.1		7	10	10	16	18	21	24	27	30	33	35	38	41	44	47	50	52
	6.4		7	10	10	16	19	21	24	27	30	33	36	38	41	44	47	50	53
	6.6		7	10	10	16	19	22	24	27	30	33	36	39	42	44	47	50	53
	6.9		8	10	10	16	19	22	25	27	30	33	36	39	42	45	47	50	53
	7.1		8	11	11	16	19	22	25	28	31	33	36	39	42	45	48	50	53
	7.3		8	11	11	16	19	22	25	28	31	34	36	39	42	45	48	51	53
	7.6		8	11	11	17	20	22	25	28	31	34	37	39	42	45	48	51	54
	7.8		8	11	11	17	20	23	25	28	31	34	37	40	42	45	48	51	54
	8.1		9	11	11	17	20	23	26	28	31	34	37	40	43	45	48	51	54
	8.3		9	12	12	17	20	23	26	29	31	34	37	40	43	46	48	51	54
	8.6		9	12	12	17	20	23	26	29	32	34	37	40	43	46	49	51	54
	8.8		9	12	12	18	20	23	26	29	32	35	37	40	43	46	49	52	55
	9.0		9	12	12	18	21	23	26	29	32	35	38	41	43	46	49	52	55
	9.3		9	12	12	18	21	24	26	29	32	35	38	41	44	46	49	52	55
	9.5		10	12	12	18	21	24	27	30	32	35	38	41	44	47	49	52	55
	9.8		10	13	13	18	21	24	27	30	33	35	38	41	44	47	50	52	55
	10.0		10	13	13	19	21	24	27	30	33	36	38	41	44	47	50	53	55

Multivariate model - Chromium VI

Worst-case effluent discharge and median river flow

Chromium VI			Key	
Discharge rate	0.0066 m3/s	Worst case effluent flow rate Median	9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
River flow rate	0.0072 m3/s		9.99	Concentrations above the AEPR freshwater limit (10 µg/L)
Effluent water				
min	10 µg/L			
Effluent water max	200 µg/L			
Receiving min	0.1 µg/L			
Receiving max	10 µg/L			
20m				

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	3	3	6	7	8	10	11	13	14	15	17	18	20	21	23	24	24
	0.3	1	3	3	6	7	9	10	11	13	14	16	17	19	20	21	23	24	24
	0.6	2	3	3	6	7	9	10	12	13	14	16	17	19	20	22	23	24	24
	0.8	2	3	3	6	8	9	10	12	13	15	16	18	19	20	22	23	25	25
	1.1	2	4	4	6	8	9	11	12	13	15	16	18	19	21	22	23	25	25
	1.3	2	4	4	7	8	9	11	12	14	15	17	18	19	21	22	24	25	25
	1.5	3	4	4	7	8	10	11	12	14	15	17	18	20	21	22	24	25	25
	1.8	3	4	4	7	8	10	11	13	14	16	17	18	20	21	23	24	25	25
	2.0	3	4	4	7	9	10	12	13	14	16	17	19	20	21	23	24	26	26
	2.3	3	5	5	7	9	10	12	13	15	16	17	19	20	22	23	24	26	26
	2.5	3	5	5	8	9	11	12	13	15	16	18	19	20	22	23	25	26	26
	2.8	4	5	5	8	9	11	12	14	15	16	18	19	21	22	23	25	26	26
	3.0	4	5	5	8	10	11	12	14	15	17	18	19	21	22	24	25	27	27
	3.2	4	5	5	8	10	11	13	14	15	17	18	20	21	23	24	25	27	27
	3.5	4	6	6	9	10	11	13	14	16	17	18	20	21	23	24	26	27	27
	3.7	4	6	6	9	10	12	13	14	16	17	19	20	22	23	24	26	27	27
	4.0	5	6	6	9	10	12	13	15	16	17	19	20	22	23	25	26	27	27
	4.2	5	6	6	9	11	12	13	15	16	18	19	21	22	23	25	26	28	28
	4.4	5	7	7	9	11	12	14	15	16	18	19	21	22	24	25	26	28	28
	4.7	5	7	7	10	11	12	14	15	17	18	20	21	22	24	25	27	28	28
	4.9	6	7	7	10	11	13	14	15	17	18	20	21	23	24	25	27	28	28
	5.2	6	7	7	10	11	13	14	16	17	19	20	21	23	24	26	27	28	28
	5.4	6	7	7	10	12	13	14	16	17	19	20	22	23	24	26	27	29	29
	5.7	6	8	8	10	12	13	15	16	18	19	20	22	23	25	26	27	29	29
	5.9	6	8	8	11	12	13	15	16	18	19	21	22	23	25	26	28	29	29
	6.1	7	8	8	11	12	14	15	17	18	19	21	22	24	25	26	28	29	29
	6.4	7	8	8	11	12	14	15	17	18	20	21	22	24	25	27	28	30	30
	6.6	7	8	8	11	13	14	16	17	18	20	21	23	24	25	27	28	30	30
	6.9	7	9	9	11	13	14	16	17	19	20	21	23	24	26	27	29	30	30
	7.1	7	9	9	12	13	15	16	17	19	20	22	23	24	26	27	29	30	30
	7.3	8	9	9	12	13	15	16	18	19	20	22	23	25	26	28	29	30	30
	7.6	8	9	9	12	14	15	16	18	19	21	22	23	25	26	28	29	31	31
	7.8	8	10	10	12	14	15	17	18	19	21	22	24	25	27	28	29	31	31
	8.1	8	10	10	13	14	15	17	18	20	21	22	24	25	27	28	30	31	31
	8.3	9	10	10	13	14	16	17	18	20	21	23	24	26	27	28	30	31	31
	8.6	9	10	10	13	14	16	17	19	20	22	23	24	26	27	29	30	31	31
	8.8	9	10	10	13	15	16	17	19	20	22	23	25	26	27	29	30	32	32
	9.0	9	11	11	13	15	16	18	19	21	22	23	25	26	28	29	30	32	32
	9.3	9	11	11	14	15	16	18	19	21	22	24	25	26	28	29	31	32	32
	9.5	10	11	11	14	15	17	18	20	21	22	24	25	27	28	29	31	32	32
	9.8	10	11	11	14	15	17	18	20	21	23	24	25	27	28	30	31	33	33
	10.0	10	11	11	14	16	17	19	20	21	23	24	26	27	28	30	31	33	33

Multivariate model - Chromium VI

Worst-case effluent discharge and median river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0072 m³/s Median

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 30m

		Effluent Chromium VI (µg/L)																		
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	1	1	1	3	4	4	4	5	6	6	7	8	9	9	10	11	11	12	
	0.3	1	2	2	3	4	4	4	5	6	7	7	8	9	9	10	11	12	12	
	0.6	1	2	2	3	4	5	5	6	7	8	8	9	10	10	11	12	13		
	0.8	1	2	2	4	4	5	6	6	7	8	8	9	10	11	11	12	13		
	1.1	2	2	2	4	4	5	6	7	7	8	9	9	10	11	12	12	13		
	1.3	2	3	3	4	5	5	6	7	8	8	9	10	10	11	12	12	13		
	1.5	2	3	3	4	5	6	6	7	8	8	9	10	11	11	12	13	13		
	1.8	2	3	3	4	5	6	7	7	8	9	9	10	11	12	12	13	14		
	2.0	3	3	3	5	5	6	7	7	8	9	10	10	11	12	12	13	14		
	2.3	3	3	3	5	6	6	7	8	8	9	10	11	11	12	13	13	14		
	2.5	3	4	4	5	6	7	7	8	9	9	10	11	11	12	13	14	14		
	2.8	3	4	4	5	6	7	7	8	9	10	10	11	12	12	13	14	15		
	3.0	3	4	4	6	6	7	8	8	9	10	11	11	12	13	13	14	15		
	3.2	4	4	4	6	6	7	8	9	9	10	11	11	12	13	14	14	15		
	3.5	4	5	5	6	7	7	8	9	10	10	11	12	12	13	14	15	15		
	3.7	4	5	5	6	7	8	8	9	10	10	11	12	12	13	13	14	15		
	4.0	4	5	5	6	7	8	9	9	10	11	11	12	12	13	14	14	15		
	4.2	5	5	5	7	7	8	9	10	10	11	12	12	13	13	14	14	15		
	4.4	5	5	5	7	8	8	9	10	10	11	12	12	13	13	14	15	16		
	4.7	5	6	6	7	8	9	9	10	11	11	12	12	13	14	14	15	16		
	4.9	5	6	6	7	8	9	9	10	11	12	12	13	13	14	14	15	16		
	5.2	5	6	6	8	8	9	10	10	11	12	12	13	13	14	15	15	16		
	5.4	6	6	6	8	9	9	10	11	11	12	12	13	13	14	15	16	16		
	5.7	6	7	7	8	9	9	10	11	12	12	13	13	14	14	15	16	17		
	5.9	6	7	7	8	9	10	10	11	12	12	13	13	14	15	15	16	17		
	6.1	6	7	7	8	9	10	11	11	12	12	13	13	14	15	16	16	17		
	6.4	7	7	7	9	9	10	11	12	12	13	13	14	14	15	16	17	18		
	6.6	7	8	8	9	10	10	11	12	12	13	13	14	15	15	16	17	18		
	6.9	7	8	8	9	10	11	11	12	12	13	13	14	15	16	16	17	18		
	7.1	7	8	8	9	10	11	12	12	13	14	14	15	16	17	17	18	19		
	7.3	8	8	8	10	10	11	12	12	13	14	15	15	16	17	17	18	19		
	7.6	8	8	8	10	11	11	12	12	13	13	14	15	16	16	17	18	19		
	7.8	8	9	9	10	11	12	12	13	14	14	15	16	16	17	18	19	19		
	8.1	8	9	9	10	11	12	12	13	14	15	15	16	17	17	18	19	20		
	8.3	8	9	9	11	11	12	13	13	14	15	16	16	17	18	18	19	20		
	8.6	9	9	9	11	11	12	13	14	14	15	16	16	17	18	19	19	20		
	8.8	9	10	10	11	12	12	13	14	15	15	16	17	17	18	19	20	20		
	9.0	9	10	10	11	12	13	13	14	15	15	16	17	18	18	19	20	20		
	9.3	9	10	10	11	12	13	14	14	15	16	16	17	18	19	19	20	21		
	9.5	10	10	10	12	12	13	14	15	15	16	17	17	18	19	19	20	21		
	9.8	10	10	10	12	13	13	14	15	15	16	17	18	18	19	20	20	21		
	10.0	10	11	11	12	13	14	14	15	16	16	17	18	18	19	19	20	21		

Multivariate model - Chromium VI

Worst-case effluent discharge and median river flow

Chromium VI

Discharge rate	0.0066 m ³ /s	Worst case effluent flow rate
River flow rate	0.0072 m ³ /s	Median

Key

9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min	10 µg/L
Effluent water max	200 µg/L
Receiving min	0.1 µg/L
Receiving max	10 µg/L
40m	

		Effluent Chromium VI (µg/L)																	
0.0		10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	
	0.3	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6	
	0.6	1	1	1	2	2	3	3	3	4	4	4	5	5	5	6	6	7	
	0.8	1	1	1	2	3	3	3	4	4	4	5	5	5	6	6	6	7	
	1.1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	
	1.3	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	7	
	1.5	2	2	2	3	3	4	4	4	5	5	5	6	6	6	7	7	7	
	1.8	2	2	2	3	3	4	4	5	5	5	6	6	6	7	7	7	8	
	2.0	2	3	3	3	4	4	4	5	5	5	6	6	7	7	7	8	8	
	2.3	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	
	2.5	3	3	3	4	4	5	5	5	6	6	6	7	7	7	8	8	8	
	2.8	3	3	3	4	4	5	5	5	6	6	7	7	7	8	8	8	9	
	3.0	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	9	9	
	3.2	3	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	
	3.5	4	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9	
	3.7	4	4	4	5	5	6	6	6	7	7	7	8	8	9	9	9	10	
	4.0	4	4	4	5	6	6	6	7	7	7	8	8	8	9	9	9	10	
	4.2	4	5	5	5	6	6	7	7	7	8	8	8	8	9	9	10	10	
	4.4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	
	4.7	5	5	5	6	6	7	7	7	8	8	8	8	9	9	9	10	11	
	4.9	5	5	5	6	7	7	7	8	8	8	8	9	9	9	10	10	11	
	5.2	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10	11	
	5.4	6	6	6	7	7	7	8	8	8	8	9	9	9	10	10	11	11	
	5.7	6	6	6	7	7	8	8	8	8	9	9	9	10	10	10	11	11	
	5.9	6	6	6	7	7	8	8	8	9	9	9	10	10	10	11	11	12	
	6.1	6	7	7	7	8	8	8	8	9	9	9	10	10	11	11	11	12	
	6.4	6	7	7	8	8	8	8	8	9	9	10	10	10	11	11	11	12	
	6.6	7	7	7	8	8	8	8	9	9	10	10	10	11	11	11	12	12	
	6.9	7	7	7	8	8	8	9	9	9	10	10	11	11	11	12	12	13	
	7.1	7	8	8	8	8	9	9	9	10	10	10	11	11	11	12	12	13	
	7.3	7	8	8	8	8	9	9	10	10	10	11	11	11	12	12	12	13	
	7.6	8	8	8	8	9	9	9	10	10	10	11	11	12	12	12	13	13	
7.8	8	8	8	8	9	9	10	10	10	11	11	11	12	12	13	13	14		
8.1	8	8	8	8	9	10	10	10	11	11	11	12	12	12	13	13	14		
8.3	8	9	9	9	9	10	10	10	11	11	12	12	12	13	13	14	14		
8.6	9	9	9	10	10	10	11	11	11	12	12	12	13	13	14	14	14		
8.8	9	9	9	10	10	11	11	11	12	12	12	13	13	13	14	14	15		
9.0	9	9	9	10	10	11	11	12	12	12	13	13	13	14	14	14	15		
9.3	9	10	10	10	11	11	11	12	12	12	13	13	14	14	14	15	15		
9.5	10	10	10	11	11	11	12	12	12	13	13	13	14	14	15	15	15		
9.8	10	10	10	11	11	12	12	12	13	13	13	14	14	14	15	15	15		
10.0	10	10	10	11	11	12	12	12	13	13	13	14	14	14	15	15	15		

Multivariate model - Chromium VI

Average case effluent discharge and median river flow

Chromium VI

Discharge rate	0.0053 m3/s	Average effluent flow rate
River flow rate	0.0072 m3/s	Median

Key

9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
9.99	Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min	10 µg/L
Effluent water max	200 µg/L
Receiving min	0.1 µg/L
Receiving max	10 µg/L

Discharge point

		Effluent Chromium VI (µg/L)																	
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	4	9	9	19	24	29	34	39	44	49	54	59	64	69	74	79	84	85
	0.3	4	9	9	19	24	29	34	39	44	49	54	59	65	70	75	80	85	85
	0.6	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	0.8	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	1.1	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	1.3	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	1.5	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	1.8	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	80	85	85
	2.0	5	10	10	20	25	30	35	40	45	50	55	60	65	70	75	81	86	86
	2.3	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	2.5	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	2.8	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	3.0	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	3.2	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	3.5	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	3.7	6	11	11	21	26	31	36	41	46	51	56	61	66	71	76	81	86	86
	4.0	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	4.2	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	4.4	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	4.7	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	4.9	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	5.2	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	5.4	7	12	12	22	27	32	37	42	47	52	57	62	67	72	77	82	87	87
	5.7	7	12	12	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	5.9	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	6.1	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	6.4	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	6.6	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	6.9	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	7.1	8	13	13	23	28	33	38	43	48	53	58	63	68	73	78	83	88	88
	7.3	8	13	13	23	28	34	39	44	49	54	59	64	69	74	79	84	89	89
	7.6	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	7.8	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	8.1	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	8.3	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	8.6	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	8.8	9	14	14	24	29	34	39	44	49	54	59	64	69	74	79	84	89	89
	9.0	9	14	14	24	29	34	39	44	50	55	60	65	70	75	80	85	90	90
	9.3	10	15	15	25	30	35	40	45	50	55	60	65	70	75	80	85	90	90
	9.5	10	15	15	25	30	35	40	45	50	55	60	65	70	75	80	85	90	90
	9.8	10	15	15	25	30	35	40	45	50	55	60	65	70	75	80	85	90	90
	10.0	10	15	15	25	30	35	40	45	50	55	60	65	70	75	80	85	90	90

Multivariate model - Chromium VI

Average case effluent discharge and median river flow

Chromium VI
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.0072 m3/s Median

Key
9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
Effluent water max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L
10m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	2	5	5	10	12	15	17	20	22	25	27	30	32	35	37	40	42	42
	0.3	2	5	5	10	12	15	17	20	22	25	27	30	32	35	37	40	42	42
	0.6	3	5	5	10	13	15	18	20	23	25	28	30	33	35	38	40	43	43
	0.8	3	5	5	10	13	15	18	20	23	25	28	30	33	35	38	40	43	43
	1.1	3	5	5	10	13	15	18	20	23	25	28	30	33	35	38	41	43	43
	1.3	3	6	6	11	13	16	18	21	23	26	28	31	33	36	38	41	43	43
	1.5	3	6	6	11	13	16	18	21	23	26	28	31	33	36	38	41	43	43
	1.8	4	6	6	11	14	16	19	21	24	26	29	31	34	36	39	41	44	44
	2.0	4	6	6	11	14	16	19	21	24	26	29	31	34	36	39	41	44	44
	2.3	4	6	6	11	14	16	19	21	24	26	29	31	34	36	39	41	44	44
	2.5	4	7	7	12	14	17	19	22	24	27	29	32	34	37	39	42	44	44
	2.8	4	7	7	12	14	17	19	22	24	27	29	32	34	37	39	42	44	44
	3.0	4	7	7	12	14	17	19	22	25	27	30	32	35	37	40	42	45	45
	3.2	5	7	7	12	15	17	20	22	25	27	30	32	35	37	40	42	45	45
	3.5	5	7	7	12	15	17	20	22	25	27	30	32	35	37	40	42	45	45
	3.7	5	8	8	13	15	18	20	23	25	28	30	33	35	38	40	43	45	45
	4.0	5	8	8	13	15	18	20	23	25	28	30	33	35	38	40	43	45	45
	4.2	5	8	8	13	15	18	20	23	25	28	30	33	35	38	40	43	45	45
	4.4	6	8	8	13	16	18	21	23	26	28	31	33	36	38	41	43	46	46
	4.7	6	8	8	13	16	18	21	23	26	28	31	33	36	38	41	43	46	46
	4.9	6	9	9	14	16	19	21	24	26	29	31	34	36	39	41	44	46	46
	5.2	6	9	9	14	16	19	21	24	26	29	31	34	36	39	41	44	46	46
	5.4	6	9	9	14	16	19	21	24	26	29	31	34	36	39	41	44	46	46
	5.7	7	9	9	14	17	19	22	24	27	29	32	34	37	39	42	44	47	47
	5.9	7	9	9	14	17	19	22	24	27	29	32	34	37	39	42	44	47	47
	6.1	7	9	9	14	17	19	22	24	27	29	32	34	37	40	42	45	47	47
	6.4	7	10	10	15	17	20	22	25	27	30	32	35	37	40	42	45	47	47
	6.6	7	10	10	15	17	20	22	25	27	30	32	35	37	40	42	45	47	47
	6.9	8	10	10	15	18	20	23	25	28	30	33	35	38	40	43	45	48	48
	7.1	8	10	10	15	18	20	23	25	28	30	33	35	38	40	43	45	48	48
	7.3	8	10	10	15	18	20	23	25	28	30	33	35	38	40	43	45	48	48
	7.6	8	11	11	16	18	21	23	26	28	31	33	36	38	41	43	46	48	48
	7.8	8	11	11	16	18	21	23	26	28	31	33	36	38	41	43	46	48	48
	8.1	8	11	11	16	18	21	23	26	29	31	34	36	39	41	44	46	49	49
	8.3	9	11	11	16	19	21	24	26	29	31	34	36	39	41	44	46	49	49
	8.6	9	11	11	16	19	21	24	26	29	31	34	36	39	41	44	46	49	49
	8.8	9	12	12	17	19	22	24	27	29	32	34	37	39	42	44	47	49	49
	9.0	9	12	12	17	19	22	24	27	29	32	34	37	39	42	44	47	49	49
	9.3	9	12	12	17	19	22	24	27	29	32	34	37	39	42	44	47	49	49
	9.5	10	12	12	17	20	22	25	27	30	32	35	37	40	42	45	47	50	50
	9.8	10	12	12	17	20	22	25	27	30	32	35	37	40	42	45	47	50	50
	10.0	10	13	13	18	20	23	25	28	30	33	35	38	40	43	45	48	50	50

Multivariate model - Chromium VI

Average case effluent discharge and median river flow

Chromium VI
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.0072 m3/s Median

Key
9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
min 10 µg/L
Effluent water
max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L
20m

		Effluent Chromium VI (µg/L)																		
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	1	2	2	5	6	7	9	10	11	12	14	15	16	17	19	20	21	21	
	0.3	1	3	3	5	6	8	9	10	11	13	14	15	16	18	19	20	21	21	
	0.6	2	3	3	5	7	8	9	10	12	13	14	15	17	18	19	20	22	22	
	0.8	2	3	3	6	7	8	9	11	12	13	14	16	17	18	19	21	22	22	
	1.1	2	3	3	6	7	8	10	11	12	13	15	16	17	18	20	21	22	22	
	1.3	2	3	3	6	7	8	10	11	12	13	15	16	17	18	20	21	22	22	
	1.5	2	4	4	6	7	9	10	11	12	14	15	16	17	19	20	21	22	22	
	1.8	3	4	4	6	8	9	10	11	13	14	15	16	18	19	20	21	23	23	
	2.0	3	4	4	7	8	9	10	12	13	14	15	17	18	19	20	22	23	23	
	2.3	3	4	4	7	8	9	11	12	13	14	16	17	18	19	21	22	23	23	
	2.5	3	5	5	7	8	10	11	12	13	15	16	17	18	20	21	22	23	23	
	2.8	4	5	5	7	9	10	11	12	14	15	16	17	19	20	21	22	24	24	
	3.0	4	5	5	7	9	10	11	12	14	15	16	18	19	20	21	23	24	24	
	3.2	4	5	5	8	9	10	11	13	14	15	16	18	19	20	21	23	24	24	
	3.5	4	5	5	8	9	10	12	13	14	15	17	18	19	20	22	23	24	24	
	3.7	4	6	6	8	9	11	12	13	14	16	17	18	19	21	22	23	24	24	
	4.0	5	6	6	8	10	11	12	13	15	16	17	18	20	21	22	23	25	25	
	4.2	5	6	6	9	10	11	12	14	15	16	17	19	20	21	22	24	25	25	
	4.4	5	6	6	9	10	11	13	14	15	16	18	19	20	21	23	24	25	25	
	4.7	5	6	6	9	10	12	13	14	15	17	18	19	20	22	23	24	25	25	
	4.9	5	7	7	9	10	12	13	14	15	17	18	19	20	22	23	24	25	25	
	5.2	6	7	7	9	11	12	13	14	16	17	18	19	21	22	23	24	26	26	
	5.4	6	7	7	10	11	12	13	15	16	17	18	20	21	22	23	25	26	26	
	5.7	6	7	7	10	11	12	14	15	16	17	19	20	21	22	24	25	26	26	
	5.9	6	8	8	10	11	13	14	15	16	18	19	20	21	23	24	25	26	26	
	6.1	7	8	8	10	12	13	14	15	17	18	19	20	22	23	24	25	27	27	
	6.4	7	8	8	11	12	13	14	16	17	18	19	21	22	23	24	26	27	27	
	6.6	7	8	8	11	12	13	14	16	17	18	19	21	22	23	25	26	27	27	
	6.9	7	8	8	11	12	13	15	16	17	18	20	21	22	23	25	26	27	27	
	7.1	7	9	9	11	12	14	15	16	17	19	20	21	22	24	25	26	27	27	
	7.3	8	9	9	11	13	14	15	16	18	19	20	21	23	24	25	26	28	28	
	7.6	8	9	9	12	13	14	15	17	18	19	20	22	23	24	25	27	28	28	
7.8	8	9	9	12	13	14	16	17	18	19	21	22	23	24	26	27	28	28		
8.1	8	10	10	12	13	15	16	17	18	20	21	22	23	25	26	27	28	28		
8.3	8	10	10	12	13	15	16	17	19	20	21	22	24	25	26	27	29	29		
8.6	9	10	10	12	14	15	16	17	19	20	21	22	24	25	26	27	29	29		
8.8	9	10	10	13	14	15	16	18	19	20	21	23	24	25	26	28	29	29		
9.0	9	10	10	13	14	15	17	18	19	20	22	23	24	25	27	28	29	29		
9.3	9	11	11	13	14	16	17	18	19	21	22	23	24	26	27	28	29	29		
9.5	10	11	11	13	15	16	17	18	20	21	22	23	25	26	27	28	30	30		
9.8	10	11	11	14	15	16	17	19	20	21	22	24	25	26	27	29	30	30		
10.0	10	11	11	14	15	16	18	19	20	21	23	24	25	26	28	29	30	30		

Multivariate model - Chromium VI

Average case effluent discharge and median river flow

Chromium VI

Discharge rate 0.0053 m³/s Average effluent flow rate
 River flow rate 0.0072 m³/s Median

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L
 30m

		Effluent Chromium VI (µg/L)																		
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0	
Receiving Water Chromium VI (µg/L)	0.1	1	1	1	2	3	4	4	5	6	6	7	8	8	9	9	10	10	11	
	0.3	1	1	1	3	3	4	5	5	6	6	7	8	8	9	10	10	10	11	
	0.6	1	2	2	3	4	4	5	5	6	7	7	8	9	9	10	10	10	11	
	0.8	1	2	2	3	4	4	5	6	6	7	8	8	9	9	10	11	11	11	
	1.1	2	2	2	3	4	5	5	6	7	7	8	8	9	10	10	11	11	12	
	1.3	2	2	2	4	4	5	6	6	7	7	8	9	9	10	11	11	11	12	
	1.5	2	3	3	4	4	5	6	6	7	8	8	9	10	10	11	11	11	12	
	1.8	2	3	3	4	5	5	6	7	7	8	8	9	10	10	11	11	12	12	
	2.0	2	3	3	4	5	6	6	7	7	8	9	9	10	11	11	11	12	12	
	2.3	3	3	3	5	5	6	6	7	8	8	9	10	10	11	11	11	12	13	
	2.5	3	4	4	5	5	6	7	7	8	9	9	10	10	11	11	12	12	13	
	2.8	3	4	4	5	6	6	7	8	8	9	9	10	11	11	11	12	13	13	
	3.0	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	12	13	13	
	3.2	4	4	4	5	6	7	7	8	9	9	10	10	11	12	12	12	13	14	
	3.5	4	4	4	6	6	7	8	8	9	9	10	11	11	12	13	13	14	14	
	3.7	4	5	5	6	7	7	8	8	9	10	10	11	12	12	12	13	13	14	
	4.0	4	5	5	6	7	7	8	9	9	10	11	11	12	12	12	13	14	14	
	4.2	5	5	5	6	7	8	8	9	10	10	11	11	12	13	13	14	14	15	
	4.4	5	5	5	7	7	8	8	9	10	10	11	12	12	13	14	14	15	15	
	4.7	5	6	6	7	7	8	9	9	10	11	11	12	12	13	14	14	15	15	
	4.9	5	6	6	7	8	8	9	10	10	11	11	12	13	13	14	15	15	16	
	5.2	5	6	6	7	8	9	9	10	10	11	12	12	13	14	14	15	15	16	
	5.4	6	6	6	8	8	9	9	10	11	11	12	13	13	14	14	15	16	16	
	5.7	6	7	7	8	8	9	10	10	11	12	12	13	13	14	15	15	16	17	
	5.9	6	7	7	8	9	9	10	10	11	12	12	13	14	14	15	16	16	17	
	6.1	6	7	7	8	9	9	10	11	11	12	13	13	14	14	15	16	16	17	
	6.4	7	7	7	8	9	10	10	11	12	12	13	13	14	15	15	16	17	17	
	6.6	7	7	7	9	9	10	11	11	12	12	13	14	14	15	16	16	17	18	
	6.9	7	8	8	9	10	10	11	11	12	13	13	14	15	15	16	16	17	18	
	7.1	7	8	8	9	10	10	11	12	12	13	14	14	15	15	16	17	17	18	
	7.3	7	8	8	9	10	11	11	12	12	13	14	14	15	16	16	17	17	18	
	7.6	8	8	8	10	10	11	11	12	13	13	14	15	15	16	16	17	18	18	
	7.8	8	9	9	10	10	11	12	12	13	14	14	15	15	16	17	17	18	19	
	8.1	8	9	9	10	11	11	12	13	13	14	14	15	16	16	17	18	18	19	
	8.3	8	9	9	10	11	12	12	13	13	14	15	15	16	17	17	18	19	20	
	8.6	9	9	9	11	11	12	12	13	14	14	15	16	16	17	17	18	19	20	
	8.8	9	9	9	11	11	12	13	13	14	14	15	16	16	17	18	18	19	20	
	9.0	9	10	10	11	12	12	13	13	14	15	15	16	17	17	18	18	19	20	
	9.3	9	10	10	11	12	12	13	14	14	15	16	16	17	17	18	19	19	20	
	9.5	10	10	10	11	12	13	13	14	15	15	16	16	17	18	18	19	20	20	
	9.8	10	10	10	12	12	13	14	14	15	15	16	17	17	18	19	19	20	20	
	10.0	10	11	11	12	13	13	14	14	15	16	16	17	18	18	19	19	20	20	

Multivariate model - Chromium VI

Average case effluent discharge and median river flow

Chromium VI
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.0072 m3/s Median

Key
9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
min 10 µg/L
Effluent water
max 200 µg/L
Receiving min 0.1 µg/L
Receiving max 10 µg/L
40m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	0	1	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	5
	0.3	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	5	5	6
	0.6	1	1	1	2	2	2	2	3	3	3	3	4	4	4	5	5	6	6
	0.8	1	1	1	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6
	1.1	1	2	2	2	3	3	3	3	3	4	4	4	5	5	5	6	6	6
	1.3	2	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6	6	7
	1.5	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	6	6	7
	1.8	2	2	2	3	3	4	4	4	5	5	5	5	6	6	6	6	7	7
	2.0	2	3	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7
	2.3	2	3	3	3	4	4	4	4	5	5	5	6	6	6	7	7	7	7
	2.5	3	3	3	4	4	4	5	5	5	5	6	6	6	6	7	7	7	8
	2.8	3	3	3	4	4	5	5	5	5	6	6	6	6	7	7	7	8	8
	3.0	3	3	3	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8
	3.2	3	4	4	4	5	5	5	6	6	6	6	7	7	7	7	8	8	8
	3.5	4	4	4	5	5	5	6	6	6	6	6	7	7	7	8	8	8	9
	3.7	4	4	4	5	5	5	6	6	6	6	7	7	7	8	8	8	9	9
	4.0	4	4	4	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9
	4.2	4	5	5	5	6	6	6	6	7	7	7	7	8	8	8	9	9	9
	4.4	5	5	5	6	6	6	6	7	7	7	7	8	8	8	9	9	9	10
	4.7	5	5	5	6	6	6	7	7	7	7	8	8	8	9	9	9	10	10
	4.9	5	5	5	6	6	7	7	7	8	8	8	8	9	9	9	9	10	10
	5.2	5	6	6	6	7	7	7	7	8	8	8	8	9	9	9	10	10	10
	5.4	6	6	6	6	7	7	7	8	8	8	8	9	9	9	10	10	10	11
	5.7	6	6	6	7	7	7	8	8	8	8	9	9	9	10	10	10	10	11
	5.9	6	6	6	7	7	8	8	8	8	9	9	9	9	10	10	10	11	11
	6.1	6	7	7	7	7	8	8	8	8	9	9	9	10	10	10	11	11	11
	6.4	6	7	7	7	8	8	8	8	9	9	9	10	10	10	11	11	11	11
	6.6	7	7	7	8	8	8	8	9	9	9	10	10	10	10	11	11	11	12
	6.9	7	7	7	8	8	8	9	9	9	9	10	10	10	11	11	11	12	12
	7.1	7	7	7	8	8	8	9	9	9	10	10	10	11	11	11	12	12	12
	7.3	7	8	8	8	9	9	9	9	10	10	10	11	11	11	11	12	12	12
	7.6	8	8	8	9	9	9	9	10	10	10	10	11	11	11	12	12	12	13
	7.8	8	8	8	9	9	9	9	10	10	10	11	11	11	11	12	12	13	13
	8.1	8	8	8	9	9	10	10	10	10	11	11	11	12	12	12	13	13	13
	8.3	8	9	9	9	10	10	10	10	11	11	11	11	12	12	12	13	13	13
	8.6	9	9	9	10	10	10	10	10	11	11	11	12	12	12	13	13	13	14
	8.8	9	9	9	10	10	10	11	11	11	11	12	12	12	13	13	13	14	14
	9.0	9	9	9	10	10	11	11	11	11	12	12	12	13	13	13	13	14	14
	9.3	9	10	10	10	11	11	11	11	11	12	12	12	13	13	13	14	14	14
	9.5	10	10	10	10	11	11	11	11	12	12	12	13	13	13	14	14	14	15
	9.8	10	10	10	11	11	11	12	12	12	12	13	13	13	14	14	14	14	15
	10.0	10	10	10	11	11	12	12	12	12	13	13	13	13	14	14	14	15	15

Multivariate model - Chromium VI

Worst-case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
 Effluent water max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

Discharge point

		Effluent Chromium VI (µg/L)																	
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	7	16	16	33	42	50	59	68	76	85	93	102	111	119	128	136	145	
	0.3	7	16	16	33	42	50	59	68	76	85	93	102	111	119	128	137	145	
	0.6	7	16	16	33	42	50	59	68	76	85	94	102	111	119	128	137	145	
	0.8	7	16	16	33	42	51	59	68	76	85	94	102	111	119	128	137	145	
	1.1	8	16	16	33	42	51	59	68	76	85	94	102	111	120	128	137	145	
	1.3	8	16	16	33	42	51	59	68	77	85	94	102	111	120	128	137	145	
	1.5	8	16	16	34	42	51	59	68	77	85	94	102	111	120	128	137	145	
	1.8	8	16	16	34	42	51	59	68	77	85	94	102	111	120	128	137	146	
	2.0	8	16	16	34	42	51	59	68	77	85	94	103	111	120	128	137	146	
	2.3	8	16	16	34	42	51	60	68	77	85	94	103	111	120	128	137	146	
	2.5	8	17	17	34	42	51	60	68	77	85	94	103	111	120	129	137	146	
	2.8	8	17	17	34	42	51	60	68	77	86	94	103	111	120	129	137	146	
	3.0	8	17	17	34	43	51	60	68	77	86	94	103	111	120	129	137	146	
	3.2	8	17	17	34	43	51	60	68	77	86	94	103	111	120	129	137	146	
	3.5	8	17	17	34	43	51	60	68	77	86	94	103	112	120	129	137	146	
	3.7	8	17	17	34	43	51	60	69	77	86	94	103	112	120	129	137	146	
	4.0	8	17	17	34	43	51	60	69	77	86	94	103	112	120	129	138	146	
	4.2	8	17	17	34	43	51	60	69	77	86	95	103	112	120	129	138	146	
	4.4	8	17	17	34	43	52	60	69	77	86	95	103	112	120	129	138	146	
	4.7	9	17	17	34	43	52	60	69	77	86	95	103	112	121	129	138	146	
	4.9	9	17	17	34	43	52	60	69	78	86	95	103	112	121	129	138	146	
	5.2	9	17	17	35	43	52	60	69	78	86	95	103	112	121	129	138	146	
	5.4	9	17	17	35	43	52	60	69	78	86	95	103	112	121	129	138	147	
	5.7	9	17	17	35	43	52	60	69	78	86	95	104	112	121	129	138	147	
	5.9	9	17	17	35	43	52	61	69	78	86	95	104	112	121	129	138	147	
	6.1	9	18	18	35	43	52	61	69	78	86	95	104	112	121	130	138	147	
	6.4	9	18	18	35	43	52	61	69	78	87	95	104	112	121	130	138	147	
	6.6	9	18	18	35	44	52	61	69	78	87	95	104	112	121	130	138	147	
	6.9	9	18	18	35	44	52	61	69	78	87	95	104	112	121	130	138	147	
	7.1	9	18	18	35	44	52	61	69	78	87	95	104	113	121	130	138	147	
	7.3	9	18	18	35	44	52	61	70	78	87	95	104	113	121	130	138	147	
	7.6	9	18	18	35	44	52	61	70	78	87	95	104	113	121	130	139	147	
	7.8	9	18	18	35	44	52	61	70	78	87	96	104	113	121	130	139	147	
	8.1	9	18	18	35	44	53	61	70	78	87	96	104	113	121	130	139	147	
	8.3	10	18	18	35	44	53	61	70	78	87	96	104	113	121	130	139	147	
	8.6	10	18	18	35	44	53	61	70	79	87	96	104	113	122	130	139	147	
	8.8	10	18	18	36	44	53	61	70	79	87	96	104	113	122	130	139	147	
	9.0	10	18	18	36	44	53	61	70	79	87	96	104	113	122	130	139	148	
	9.3	10	18	18	36	44	53	61	70	79	87	96	105	113	122	130	139	148	
	9.5	10	18	18	36	44	53	62	70	79	87	96	105	113	122	130	139	148	
	9.8	10	19	19	36	44	53	62	70	79	87	96	105	113	122	131	139	148	
	10.0	10	19	19	36	44	53	62	70	79	88	96	105	113	122	131	139	148	

Chromium VI			Key	
Discharge rate	0.0066 m3/s	Worst case effluent flow rate	9.99	Concentrations below the AEPR freshwater limit (10 µg/L)
River flow rate	0.0025 m3/s	Q20	9.99	Concentrations above the AEPR freshwater limit (10 µg/L)
Effluent water min	10 µg/L			
Effluent water max	200 µg/L			
Receiving min	0.1 µg/L			
Receiving max	10 µg/L			
10m				

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	4	8	8	17	21	25	30	34	38	42	47	51	55	60	64	68	73	73
	0.3	4	8	8	17	21	25	30	34	38	43	47	51	56	60	64	68	73	73
	0.6	4	8	8	17	21	26	30	34	38	43	47	51	56	60	64	69	73	73
	0.8	4	8	8	17	21	26	30	34	39	43	47	52	56	60	64	69	73	73
	1.1	4	9	9	17	22	26	30	34	39	43	47	52	56	60	65	69	73	73
	1.3	4	9	9	17	22	26	30	35	39	43	48	52	56	60	65	69	73	73
	1.5	5	9	9	18	22	26	30	35	39	43	48	52	56	61	65	69	74	74
	1.8	5	9	9	18	22	26	31	35	39	44	48	52	56	61	65	69	74	74
	2.0	5	9	9	18	22	26	31	35	39	44	48	52	57	61	65	70	74	74
	2.3	5	9	9	18	22	27	31	35	40	44	48	52	57	61	65	70	74	74
	2.5	5	10	10	18	22	27	31	35	40	44	48	53	57	61	66	70	74	74
	2.8	5	10	10	18	23	27	31	36	40	44	48	53	57	61	66	70	74	74
	3.0	6	10	10	18	23	27	31	36	40	44	49	53	57	62	66	70	74	74
	3.2	6	10	10	19	23	27	32	36	40	44	49	53	57	62	66	70	75	75
	3.5	6	10	10	19	23	27	32	36	40	45	49	53	58	62	66	70	75	75
	3.7	6	10	10	19	23	28	32	36	40	45	49	53	58	62	66	71	75	75
	4.0	6	10	10	19	23	28	32	36	41	45	49	54	58	62	66	71	75	75
	4.2	6	11	11	19	24	28	32	36	41	45	49	54	58	62	67	71	75	75
	4.4	6	11	11	19	24	28	32	37	41	45	50	54	58	62	67	71	75	75
	4.7	7	11	11	20	24	28	32	37	41	45	50	54	58	63	67	71	76	76
	4.9	7	11	11	20	24	28	33	37	41	46	50	54	58	63	67	71	76	76
	5.2	7	11	11	20	24	28	33	37	41	46	50	54	59	63	67	72	76	76
	5.4	7	11	11	20	24	29	33	37	42	46	50	54	59	63	67	72	76	76
	5.7	7	12	12	20	24	29	33	37	42	46	50	55	59	63	68	72	76	76
	5.9	7	12	12	20	25	29	33	38	42	46	50	55	59	63	68	72	76	76
	6.1	8	12	12	20	25	29	33	38	42	46	51	55	59	64	68	72	76	76
	6.4	8	12	12	21	25	29	34	38	42	46	51	55	59	64	68	72	77	77
	6.6	8	12	12	21	25	29	34	38	42	47	51	55	60	64	68	72	77	77
	6.9	8	12	12	21	25	30	34	38	42	47	51	55	60	64	68	73	77	77
	7.1	8	12	12	21	25	30	34	38	43	47	51	56	60	64	68	73	77	77
	7.3	8	13	13	21	26	30	34	38	43	47	51	56	60	64	69	73	77	77
	7.6	8	13	13	21	26	30	34	39	43	47	52	56	60	64	69	73	77	77
	7.8	9	13	13	22	26	30	34	39	43	47	52	56	60	65	69	73	78	78
	8.1	9	13	13	22	26	30	35	39	43	48	52	56	60	65	69	73	78	78
	8.3	9	13	13	22	26	30	35	39	43	48	52	56	61	65	69	74	78	78
	8.6	9	13	13	22	26	31	35	39	44	48	52	56	61	65	69	74	78	78
	8.8	9	14	14	22	26	31	35	39	44	48	52	57	61	65	70	74	78	78
	9.0	9	14	14	22	27	31	35	40	44	48	52	57	61	65	70	74	78	78
	9.3	10	14	14	22	27	31	35	40	44	48	53	57	61	66	70	74	78	78
	9.5	10	14	14	23	27	31	36	40	44	48	53	57	61	66	70	74	79	79
	9.8	10	14	14	23	27	31	36	40	44	49	53	57	62	66	70	74	79	79
	10.0	10	14	14	23	27	32	36	40	44	49	53	57	62	66	70	75	79	79

Multivariate model - Chromium VI

Worst-case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.0066 m3/s Worst case effluent flow rate
 River flow rate 0.0025 m3/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
 Effluent water max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

20m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	2	4	4	8	11	13	15	17	19	21	23	26	28	30	32	34	36	36
	0.3	2	4	4	9	11	13	15	17	19	21	24	26	28	30	32	34	37	37
	0.6	2	4	4	9	11	13	15	17	20	22	24	26	28	30	32	35	37	37
	0.8	2	5	5	9	11	13	15	18	20	22	24	26	28	30	33	35	37	37
	1.1	3	5	5	9	11	13	16	18	20	22	24	26	29	31	33	35	37	37
	1.3	3	5	5	9	11	14	16	18	20	22	24	27	29	31	33	35	37	37
	1.5	3	5	5	10	12	14	16	18	20	22	25	27	29	31	33	35	38	38
	1.8	3	5	5	10	12	14	16	18	21	23	25	27	29	31	33	36	38	38
	2.0	3	6	6	10	12	14	16	19	21	23	25	27	29	31	34	36	38	38
	2.3	4	6	6	10	12	14	17	19	21	23	25	27	30	32	34	36	38	38
	2.5	4	6	6	10	12	15	17	19	21	23	25	28	30	32	34	36	38	38
	2.8	4	6	6	11	13	15	17	19	21	23	26	28	30	32	34	36	39	39
	3.0	4	6	6	11	13	15	17	19	21	24	26	28	30	32	34	37	39	39
	3.2	4	7	7	11	13	15	17	20	22	24	26	28	30	32	35	37	39	39
	3.5	5	7	7	11	13	15	18	20	22	24	26	28	31	33	35	37	39	39
	3.7	5	7	7	11	13	16	18	20	22	24	26	29	31	33	35	37	39	39
	4.0	5	7	7	12	14	16	18	20	22	24	27	29	31	33	35	37	40	40
	4.2	5	7	7	12	14	16	18	20	22	25	27	29	31	33	35	38	40	40
	4.4	5	8	8	12	14	16	18	21	23	25	27	29	31	33	36	38	40	40
	4.7	6	8	8	12	14	16	19	21	23	25	27	29	31	34	36	38	40	40
	4.9	6	8	8	12	14	17	19	21	23	25	27	30	32	34	36	38	40	40
	5.2	6	8	8	13	15	17	19	21	23	25	28	30	32	34	36	38	40	40
	5.4	6	8	8	13	15	17	19	21	23	26	28	30	32	34	36	39	41	41
	5.7	6	9	9	13	15	17	19	22	24	26	28	30	32	34	37	39	41	41
	5.9	7	9	9	13	15	17	20	22	24	26	28	30	32	35	37	39	41	41
	6.1	7	9	9	13	15	18	20	22	24	26	28	31	33	35	37	39	41	41
	6.4	7	9	9	13	16	18	20	22	24	26	29	31	33	35	37	39	41	41
	6.6	7	9	9	14	16	18	20	22	24	27	29	31	33	35	37	40	42	42
	6.9	7	10	10	14	16	18	20	23	25	27	29	31	33	35	38	40	42	42
	7.1	8	10	10	14	16	18	21	23	25	27	29	31	33	36	38	40	42	42
	7.3	8	10	10	14	16	19	21	23	25	27	29	32	34	36	38	40	42	42
	7.6	8	10	10	14	17	19	21	23	25	27	30	32	34	36	38	40	42	42
	7.8	8	10	10	15	17	19	21	23	25	28	30	32	34	36	38	41	43	43
	8.1	8	11	11	15	17	19	21	23	26	28	30	32	34	36	39	41	43	43
	8.3	9	11	11	15	17	19	22	24	26	28	30	32	34	37	39	41	43	43
	8.6	9	11	11	15	17	20	22	24	26	28	30	32	35	37	39	41	43	43
	8.8	9	11	11	15	18	20	22	24	26	28	31	33	35	37	39	41	43	43
	9.0	9	11	11	16	18	20	22	24	26	29	31	33	35	37	39	42	44	44
	9.3	9	12	12	16	18	20	22	24	27	29	31	33	35	37	40	42	44	44
	9.5	10	12	12	16	18	20	23	25	27	29	31	33	35	38	40	42	44	44
	9.8	10	12	12	16	18	21	23	25	27	29	31	33	36	38	40	42	44	44
	10.0	10	12	12	16	19	21	23	25	27	29	32	34	36	38	40	42	44	44

Multivariate model - Chromium VI

Worst-case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
 Effluent water max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

30m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	2	2	4	5	6	7	9	10	11	12	13	14	15	16	17	18	18
	0.3	1	2	2	4	6	7	8	9	10	11	12	13	14	15	16	17	18	18
	0.6	1	3	3	5	6	7	8	9	10	11	12	13	14	15	17	18	19	19
	0.8	2	3	3	5	6	7	8	9	10	11	12	13	15	16	17	18	19	19
	1.1	2	3	3	5	6	7	8	9	10	12	13	14	15	16	17	18	19	19
	1.3	2	3	3	5	6	7	9	10	11	12	13	14	15	16	17	18	19	19
	1.5	2	3	3	6	7	8	9	10	11	12	13	14	15	16	17	18	20	20
	1.8	3	4	4	6	7	8	9	10	11	12	13	14	15	17	18	19	20	20
	2.0	3	4	4	6	7	8	9	10	11	12	14	15	16	17	18	19	20	20
	2.3	3	4	4	6	7	8	9	11	12	13	14	15	16	17	18	19	20	20
	2.5	3	4	4	6	7	9	10	11	12	13	14	15	16	17	18	19	20	20
	2.8	3	4	4	7	8	9	10	11	12	13	14	15	16	17	18	20	21	21
	3.0	4	5	5	7	8	9	10	11	12	13	14	15	17	18	19	20	21	21
	3.2	4	5	5	7	8	9	10	11	12	14	15	16	17	18	19	20	21	21
	3.5	4	5	5	7	8	9	11	12	13	14	15	16	17	18	19	20	21	21
	3.7	4	5	5	8	9	10	11	12	13	14	15	16	17	18	19	20	22	22
	4.0	5	6	6	8	9	10	11	12	13	14	15	16	17	19	20	21	22	22
	4.2	5	6	6	8	9	10	11	12	13	14	15	17	18	19	20	21	22	22
	4.4	5	6	6	8	9	10	11	12	14	15	16	17	18	19	20	21	22	22
	4.7	5	6	6	8	9	11	12	13	14	15	16	17	18	19	20	21	22	22
	4.9	5	6	6	9	10	11	12	13	14	15	16	17	18	19	20	22	23	23
	5.2	6	7	7	9	10	11	12	13	14	15	16	17	19	20	21	22	23	23
	5.4	6	7	7	9	10	11	12	13	14	16	17	18	19	20	21	22	23	23
	5.7	6	7	7	9	10	11	13	14	15	16	17	18	19	20	21	22	23	23
	5.9	6	7	7	9	11	12	13	14	15	16	17	18	19	20	21	22	23	23
	6.1	6	8	8	10	11	12	13	14	15	16	17	18	19	20	22	23	24	24
	6.4	7	8	8	10	11	12	13	14	15	16	17	19	20	21	22	23	24	24
	6.6	7	8	8	10	11	12	13	14	16	17	18	19	20	21	22	23	24	24
	6.9	7	8	8	10	11	13	14	15	16	17	18	19	20	21	22	23	24	24
	7.1	7	8	8	11	12	13	14	15	16	17	18	19	20	21	22	24	25	25
	7.3	8	9	9	11	12	13	14	15	16	17	18	19	21	22	23	24	25	25
	7.6	8	9	9	11	12	13	14	15	16	17	19	20	21	22	23	24	25	25
	7.8	8	9	9	11	12	13	14	16	17	18	19	20	21	22	23	24	25	25
	8.1	8	9	9	11	13	14	15	16	17	18	19	20	21	22	23	24	25	25
	8.3	8	10	10	12	13	14	15	16	17	18	19	20	21	22	24	25	26	26
	8.6	9	10	10	12	13	14	15	16	17	18	19	21	22	23	24	25	26	26
	8.8	9	10	10	12	13	14	15	16	18	19	20	21	22	23	24	25	26	26
	9.0	9	10	10	12	13	15	16	17	18	19	20	21	22	23	24	25	26	26
	9.3	9	10	10	13	14	15	16	17	18	19	20	21	22	23	24	25	27	27
	9.5	10	11	11	13	14	15	16	17	18	19	20	21	22	24	25	26	27	27
	9.8	10	11	11	13	14	15	16	17	18	19	21	22	23	24	25	26	27	27
	10.0	10	11	11	13	14	15	16	18	19	20	21	22	23	24	25	26	27	27

Multivariate model - Chromium VI

Worst-case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water min 10 µg/L
 Effluent water max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

40m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	1	1	2	3	3	4	4	5	5	6	6	7	8	8	9	9	9
	0.3	1	1	1	2	3	3	4	5	5	6	6	7	7	8	8	9	9	9
	0.6	1	2	2	3	3	4	4	5	5	6	6	7	7	8	9	9	9	10
	0.8	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	9	10
	1.1	1	2	2	3	4	4	5	5	6	6	7	7	8	8	9	10	10	10
	1.3	2	2	2	3	4	4	5	5	6	7	7	8	8	9	9	10	10	10
	1.5	2	2	2	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
	1.8	2	3	3	4	4	5	5	6	6	7	8	8	9	9	10	10	10	11
	2.0	2	3	3	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11
	2.3	3	3	3	4	5	5	6	6	7	7	8	9	9	10	10	11	11	11
	2.5	3	3	3	4	5	6	6	7	7	8	8	9	9	10	10	10	11	11
	2.8	3	4	4	5	5	6	6	7	7	8	8	9	10	10	11	11	11	12
	3.0	3	4	4	5	5	6	7	7	8	8	9	9	10	10	11	11	11	12
	3.2	4	4	4	5	6	6	7	7	8	8	9	9	10	11	11	11	12	12
	3.5	4	4	4	5	6	6	7	8	8	9	9	10	10	11	11	11	12	12
	3.7	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13
	4.0	4	5	5	6	6	7	7	8	9	9	10	10	11	11	11	12	12	13
	4.2	4	5	5	6	7	7	8	8	9	9	10	10	11	11	11	12	13	13
	4.4	5	5	5	6	7	7	8	8	9	10	10	11	11	11	12	12	13	13
	4.7	5	5	5	7	7	8	8	9	9	10	10	11	11	11	12	12	13	14
	4.9	5	6	6	7	7	8	8	9	9	10	11	11	11	12	12	13	13	14
	5.2	5	6	6	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14
	5.4	6	6	6	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14
	5.7	6	6	6	7	8	9	9	10	10	11	11	11	12	12	13	13	14	14
	5.9	6	7	7	8	8	9	9	10	10	11	11	11	12	13	13	14	14	15
	6.1	6	7	7	8	8	9	10	10	11	11	11	12	12	13	13	14	14	15
	6.4	7	7	7	8	9	9	10	10	11	11	11	12	12	13	14	14	15	15
	6.6	7	7	7	8	9	9	10	11	11	11	12	12	13	13	14	14	15	15
	6.9	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14	15	15	16
	7.1	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15	16
	7.3	7	8	8	9	10	10	11	11	11	12	12	13	13	14	14	15	16	16
	7.6	8	8	8	9	10	10	11	11	11	12	13	13	14	14	15	15	16	16
	7.8	8	8	8	10	10	11	11	11	12	12	13	13	14	14	15	15	16	17
	8.1	8	9	9	10	10	11	11	11	12	12	13	14	14	15	15	16	16	17
	8.3	8	9	9	10	11	11	11	12	12	13	13	14	14	15	15	16	16	17
	8.6	9	9	9	10	11	11	11	12	12	13	13	14	15	15	16	16	17	17
	8.8	9	9	9	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17
	9.0	9	10	10	11	11	12	12	13	13	14	14	14	15	16	16	17	17	18
	9.3	9	10	10	11	11	12	13	13	14	14	14	15	15	16	16	17	17	18
	9.5	10	10	10	11	12	12	13	13	14	14	14	15	15	16	17	17	18	18
	9.8	10	10	10	11	12	12	13	14	14	15	15	16	16	17	17	17	18	18
	10.0	10	11	11	12	12	13	13	14	14	15	15	16	16	17	18	18	18	19

Multivariate model - Chromium VI

Average case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.00525 m3/s Average effluent flow rate
 River flow rate 0.0025 m3/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water

min 10 µg/L

Effluent water

max 200 µg/L

Receiving min

0.1 µg/L

Receiving max

10 µg/L

Discharge point

		Effluent Chromium VI (µg/L)																	
		0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	7	15	15	31	39	47	55	63	71	79	87	95	103	111	119	127	136	136
	0.3	7	15	15	31	39	47	55	63	71	79	87	95	103	111	120	128	136	136
	0.6	7	15	15	31	39	47	55	63	71	79	87	95	103	112	120	128	136	136
	0.8	7	15	15	31	39	47	55	63	71	79	87	96	104	112	120	128	136	136
	1.1	7	15	15	31	39	47	55	63	71	80	88	96	104	112	120	128	136	136
	1.3	7	15	15	31	39	47	55	64	72	80	88	96	104	112	120	128	136	136
	1.5	7	15	15	31	39	47	56	64	72	80	88	96	104	112	120	128	136	136
	1.8	7	15	15	31	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	2.0	7	15	15	32	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	2.3	8	16	16	32	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	2.5	8	16	16	32	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	2.8	8	16	16	32	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	3.0	8	16	16	32	40	48	56	64	72	80	88	96	104	112	120	128	136	136
	3.2	8	16	16	32	40	48	56	64	72	80	88	96	104	112	120	128	137	137
	3.5	8	16	16	32	40	48	56	64	72	80	88	96	104	112	121	129	137	137
	3.7	8	16	16	32	40	48	56	64	72	80	88	96	105	113	121	129	137	137
	4.0	8	16	16	32	40	48	56	64	72	80	88	97	105	113	121	129	137	137
	4.2	8	16	16	32	40	48	56	64	72	81	89	97	105	113	121	129	137	137
	4.4	8	16	16	32	40	48	56	65	73	81	89	97	105	113	121	129	137	137
	4.7	8	16	16	32	40	49	57	65	73	81	89	97	105	113	121	129	137	137
	4.9	8	16	16	32	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	5.2	8	16	16	33	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	5.4	9	17	17	33	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	5.7	9	17	17	33	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	5.9	9	17	17	33	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	6.1	9	17	17	33	41	49	57	65	73	81	89	97	105	113	121	129	137	137
	6.4	9	17	17	33	41	49	57	65	73	81	89	97	105	113	121	129	138	138
	6.6	9	17	17	33	41	49	57	65	73	81	89	97	105	113	122	130	138	138
	6.9	9	17	17	33	41	49	57	65	73	81	89	97	106	114	122	130	138	138
	7.1	9	17	17	33	41	49	57	65	73	81	90	98	106	114	122	130	138	138
	7.3	9	17	17	33	41	49	57	65	73	82	90	98	106	114	122	130	138	138
	7.6	9	17	17	33	41	49	57	66	74	82	90	98	106	114	122	130	138	138
	7.8	9	17	17	33	41	50	58	66	74	82	90	98	106	114	122	130	138	138
	8.1	9	17	17	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	8.3	9	17	17	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	8.6	10	18	18	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	8.8	10	18	18	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	9.0	10	18	18	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	9.3	10	18	18	34	42	50	58	66	74	82	90	98	106	114	122	130	138	138
	9.5	10	18	18	34	42	50	58	66	74	82	90	98	106	114	122	131	139	139
	9.8	10	18	18	34	42	50	58	66	74	82	90	98	106	114	123	131	139	139
	10.0	10	18	18	34	42	50	58	66	74	82	90	98	107	115	123	131	139	139

Multivariate model - Chromium VI

Average case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.00525 m³/s Average effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water

min 10 µg/L

Effluent water

max 200 µg/L

Receiving min

0.1 µg/L

Receiving max

10 µg/L

10m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	3	7	7	16	20	24	28	32	36	40	44	48	52	56	60	64	68	74
	0.3	4	8	8	16	20	24	28	32	36	40	44	48	52	56	60	64	68	74
	0.6	4	8	8	16	20	24	28	32	36	40	44	48	52	56	60	64	68	74
	0.8	4	8	8	16	20	24	28	32	36	40	44	48	52	56	60	64	68	74
	1.1	4	8	8	16	20	24	28	32	36	40	44	48	52	56	60	64	68	74
	1.3	4	8	8	16	20	24	28	32	36	40	44	48	53	57	61	65	69	74
	1.5	4	8	8	16	21	25	29	33	37	41	45	49	53	57	61	65	69	74
	1.8	5	9	9	17	21	25	29	33	37	41	45	49	53	57	61	65	69	74
	2.0	5	9	9	17	21	25	29	33	37	41	45	49	53	57	61	65	69	74
	2.3	5	9	9	17	21	25	29	33	37	41	45	49	53	57	61	65	69	74
	2.5	5	9	9	17	21	25	29	33	37	41	45	49	53	57	61	65	69	74
	2.8	5	9	9	17	21	25	29	33	37	41	45	49	53	57	62	66	70	74
	3.0	5	9	9	17	21	25	30	34	38	42	46	50	54	58	62	66	70	74
	3.2	6	10	10	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74
	3.5	6	10	10	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74
	3.7	6	10	10	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74
	4.0	6	10	10	18	22	26	30	34	38	42	46	50	54	58	62	66	70	74
	4.2	6	10	10	18	22	26	30	34	38	42	46	50	54	58	62	67	71	74
	4.4	6	10	10	18	22	26	30	34	39	43	47	51	55	59	63	67	71	74
	4.7	6	11	11	19	23	27	31	35	39	43	47	51	55	59	63	67	71	74
	4.9	7	11	11	19	23	27	31	35	39	43	47	51	55	59	63	67	71	74
	5.2	7	11	11	19	23	27	31	35	39	43	47	51	55	59	63	67	71	74
	5.4	7	11	11	19	23	27	31	35	39	43	47	51	55	59	63	67	71	74
	5.7	7	11	11	19	23	27	31	35	39	43	47	51	55	59	63	67	71	74
	5.9	7	11	11	19	23	27	31	35	39	43	48	52	56	60	64	68	72	74
	6.1	7	11	11	20	24	28	32	36	40	44	48	52	56	60	64	68	72	74
	6.4	8	12	12	20	24	28	32	36	40	44	48	52	56	60	64	68	72	74
	6.6	8	12	12	20	24	28	32	36	40	44	48	52	56	60	64	68	72	74
	6.9	8	12	12	20	24	28	32	36	40	44	48	52	56	60	64	68	72	74
	7.1	8	12	12	20	24	28	32	36	40	44	48	52	56	60	64	68	72	74
	7.3	8	12	12	20	24	28	32	36	40	44	48	52	57	61	65	69	73	74
	7.6	8	12	12	20	24	29	33	37	41	45	49	53	57	61	65	69	73	74
7.8	9	13	13	21	25	29	33	37	41	45	49	53	57	61	65	69	73	74	
8.1	9	13	13	21	25	29	33	37	41	45	49	53	57	61	65	69	73	74	
8.3	9	13	13	21	25	29	33	37	41	45	49	53	57	61	65	69	73	74	
8.6	9	13	13	21	25	29	33	37	41	45	49	53	57	61	65	69	73	74	
8.8	9	13	13	21	25	29	33	37	41	45	49	53	57	61	66	70	74	74	
9.0	9	13	13	21	25	29	33	38	42	46	50	54	58	62	66	70	74	74	
9.3	10	14	14	22	26	30	34	38	42	46	50	54	58	62	66	70	74	74	
9.5	10	14	14	22	26	30	34	38	42	46	50	54	58	62	66	70	74	74	
9.8	10	14	14	22	26	30	34	38	42	46	50	54	58	62	66	70	74	74	
10.0	10	14	14	22	26	30	34	38	42	46	50	54	58	62	66	70	74	74	

Multivariate model - Chromium VI

Average case effluent discharge and Q20 river flow

Chromium VI
 Discharge rate 0.00525 m3/s Average effluent flow rate
 River flow rate 0.0025 m3/s Q20

Key
 9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

20m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	2	4	4	8	10	12	14	16	18	20	22	24	26	28	30	32	34	34
	0.3	2	4	4	8	10	12	14	16	18	20	22	24	26	28	30	32	34	34
	0.6	2	4	4	8	10	12	14	16	18	20	22	24	26	28	30	32	34	34
	0.8	2	4	4	8	10	12	14	16	18	20	22	25	27	29	31	33	35	35
	1.1	3	5	5	9	11	13	15	17	19	21	23	25	27	29	31	33	35	35
	1.3	3	5	5	9	11	13	15	17	19	21	23	25	27	29	31	33	35	35
	1.5	3	5	5	9	11	13	15	17	19	21	23	25	27	29	31	33	35	35
	1.8	3	5	5	9	11	13	15	17	19	21	23	25	27	29	31	33	35	35
	2.0	3	5	5	9	11	13	15	17	19	21	23	26	28	30	32	34	36	36
	2.3	4	6	6	10	12	14	16	18	20	22	24	26	28	30	32	34	36	36
	2.5	4	6	6	10	12	14	16	18	20	22	24	26	28	30	32	34	36	36
	2.8	4	6	6	10	12	14	16	18	20	22	24	26	28	30	32	34	36	36
	3.0	4	6	6	10	12	14	16	18	20	22	24	26	28	30	32	34	36	36
	3.2	4	6	6	10	12	14	16	18	20	22	24	27	29	31	33	35	37	37
	3.5	5	7	7	11	13	15	17	19	21	23	25	27	29	31	33	35	37	37
	3.7	5	7	7	11	13	15	17	19	21	23	25	27	29	31	33	35	37	37
	4.0	5	7	7	11	13	15	17	19	21	23	25	27	29	31	33	35	37	37
	4.2	5	7	7	11	13	15	17	19	21	23	25	27	29	31	33	35	37	37
	4.4	5	7	7	11	13	15	17	19	21	23	25	28	30	32	34	36	38	38
	4.7	6	8	8	12	14	16	18	20	22	24	26	28	30	32	34	36	38	38
	4.9	6	8	8	12	14	16	18	20	22	24	26	28	30	32	34	36	38	38
	5.2	6	8	8	12	14	16	18	20	22	24	26	28	30	32	34	36	38	38
	5.4	6	8	8	12	14	16	18	20	22	24	26	28	30	32	34	36	38	38
	5.7	6	8	8	12	14	16	18	20	22	24	27	29	31	33	35	37	39	39
	5.9	7	9	9	13	15	17	19	21	23	25	27	29	31	33	35	37	39	39
	6.1	7	9	9	13	15	17	19	21	23	25	27	29	31	33	35	37	39	39
	6.4	7	9	9	13	15	17	19	21	23	25	27	29	31	33	35	37	39	39
	6.6	7	9	9	13	15	17	19	21	23	25	27	29	31	33	35	37	39	39
	6.9	7	9	9	13	15	17	19	21	23	25	28	30	32	34	36	38	40	40
	7.1	8	10	10	14	16	18	20	22	24	26	28	30	32	34	36	38	40	40
	7.3	8	10	10	14	16	18	20	22	24	26	28	30	32	34	36	38	40	40
	7.6	8	10	10	14	16	18	20	22	24	26	28	30	32	34	36	38	40	40
	7.8	8	10	10	14	16	18	20	22	24	26	28	30	32	34	36	38	40	40
	8.1	8	10	10	14	16	18	20	22	24	26	29	31	33	35	37	39	41	41
	8.3	9	11	11	15	17	19	21	23	25	27	29	31	33	35	37	39	41	41
	8.6	9	11	11	15	17	19	21	23	25	27	29	31	33	35	37	39	41	41
	8.8	9	11	11	15	17	19	21	23	25	27	29	31	33	35	37	39	41	41
	9.0	9	11	11	15	17	19	21	23	25	27	29	31	33	35	37	39	41	41
	9.3	9	11	11	15	17	19	21	23	25	27	30	32	34	36	38	40	42	42
	9.5	10	12	12	16	18	20	22	24	26	28	30	32	34	36	38	40	42	42
	9.8	10	12	12	16	18	20	22	24	26	28	30	32	34	36	38	40	42	42
	10.0	10	12	12	16	18	20	22	24	26	28	30	32	34	36	38	40	42	42

Multivariate model - Chromium VI

Average case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.00525 m³/s Average effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water
 min 10 µg/L
 Effluent water
 max 200 µg/L
 Receiving min 0.1 µg/L
 Receiving max 10 µg/L

30m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0.3	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0.6	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0.8	2	3	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	1.1	2	3	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	1.3	2	3	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	1.5	2	3	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	1.8	2	3	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	2.0	3	4	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	2.3	3	4	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	2.5	3	4	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	2.8	3	4	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	3.0	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	3.2	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	3.5	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	3.7	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	4.0	4	5	5	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22
	4.2	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	4.4	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	4.7	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	4.9	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	5.2	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	5.4	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	5.7	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	5.9	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	6.1	6	7	7	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24
	6.4	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	6.6	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	6.9	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	7.1	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	7.3	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	7.6	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	7.8	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	8.1	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	8.3	8	9	9	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26
	8.6	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	8.8	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	9.0	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	9.3	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	9.5	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	9.8	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	10.0	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Multivariate model - Chromium VI

Average case effluent discharge and Q20 river flow

Chromium VI

Discharge rate 0.00525 m3/s Average effluent flow rate
 River flow rate 0.0025 m3/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (10 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (10 µg/L)

Effluent water

min 10 µg/L

Effluent water

max 200 µg/L

Receiving min

0.1 µg/L

Receiving max

10 µg/L

40m

		Effluent Chromium VI (µg/L)																	
		0.0	10.0	21.9	33.8	45.6	57.5	69.4	81.3	93.1	105.0	116.9	128.8	140.6	152.5	164.4	176.3	188.1	200.0
Receiving Water Chromium VI (µg/L)	0.1	1	1	1	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
	0.3	1	1	1	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
	0.6	1	1	1	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
	0.8	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	9
	1.1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	9
	1.3	2	2	2	3	4	4	5	5	6	6	7	7	8	8	9	9	9	10
	1.5	2	2	2	3	4	4	5	5	6	6	7	7	8	8	9	9	9	10
	1.8	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	10
	2.0	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	10
	2.3	3	3	3	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11
	2.5	3	3	3	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11
	2.8	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	11
	3.0	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	11
	3.2	4	4	4	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12
	3.5	4	4	4	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12
	3.7	4	4	4	5	6	7	7	8	8	9	9	10	10	11	11	11	12	12
	4.0	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12	12
	4.2	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12	12
	4.4	5	5	5	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13
	4.7	5	5	5	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13
	4.9	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13	13
	5.2	5	6	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13	13
	5.4	6	6	6	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14
	5.7	6	6	6	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14
	5.9	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14	14
	6.1	6	7	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14	14
	6.4	7	7	7	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15
	6.6	7	7	7	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15
	6.9	7	7	7	9	9	10	10	11	11	11	12	12	13	13	14	14	15	15
	7.1	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15	15
	7.3	7	8	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15	16
	7.6	8	8	8	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16
	7.8	8	8	8	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16
	8.1	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16	16
	8.3	8	9	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16	16
	8.6	9	9	9	10	11	11	11	12	12	13	13	14	14	15	15	16	16	17
	8.8	9	9	9	10	11	11	11	12	12	13	13	14	14	15	15	16	16	17
	9.0	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16	16	17	17
	9.3	9	10	10	11	11	11	12	12	13	13	14	14	15	15	16	16	17	17
	9.5	10	10	10	11	12	12	12	13	13	14	14	15	15	16	16	17	17	18
	9.8	10	10	10	11	12	12	12	13	13	14	14	15	15	16	16	17	17	18
	10.0	10	11	11	12	12	13	13	13	14	14	15	15	16	16	17	17	18	18

Multivariate model - Zinc

Worst-Case effluent discharge and average river flow

Zinc

Discharge rate	0.0066 m3/s	Worst case effluent flow rate
River flow rate	0.018 m3/s	Average flow rate

Key

9.99	Concentrations below the AEPR freshwater limit (5 µg/L)
9.99	Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min	1 µg/L
Effluent water max	40 µg/L
Receiving min	5 µg/L
Receiving max	25 µg/L

Discharge point

		Effluent Zinc (µg/L)																	
		0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	7	7	8	9	9	10	10	11	12	12	13	14	14	14
	5.5	4	5	5	6	7	8	8	9	10	10	11	11	12	13	13	14	15	15
	6.0	5	5	5	7	7	8	9	9	10	11	11	12	12	13	14	14	15	15
	6.5	5	6	6	7	8	8	9	10	10	11	12	12	13	13	14	15	15	15
	7.0	5	6	6	7	8	9	9	10	11	11	12	13	13	14	15	15	16	16
	7.4	6	6	6	8	8	9	10	10	11	12	12	13	14	14	15	16	16	16
	7.9	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15	16	17	17
	8.4	6	7	7	8	9	10	10	11	12	12	13	14	14	15	16	16	17	17
	8.9	7	7	7	9	9	10	11	11	12	13	13	14	15	15	16	17	17	17
	9.4	7	8	8	9	10	10	11	12	12	13	14	14	15	16	16	17	18	18
	9.9	7	8	8	9	10	11	11	12	13	13	14	15	15	16	17	17	18	18
	10.4	8	9	9	10	10	11	12	12	13	14	14	15	16	16	17	18	18	18
	10.9	8	9	9	10	11	11	12	13	13	14	15	15	16	17	17	18	19	19
	11.3	9	9	9	11	11	12	12	13	14	14	15	16	16	17	18	18	19	19
	11.8	9	10	10	11	12	12	13	14	14	15	15	16	17	17	18	19	19	19
	12.3	9	10	10	11	12	13	13	14	15	15	16	16	17	18	18	19	20	20
	12.8	10	10	10	12	12	13	14	14	15	16	16	17	17	18	19	19	20	20
	13.3	10	11	11	12	13	13	14	15	15	16	17	17	18	18	19	20	20	20
	13.8	10	11	11	12	13	14	14	15	16	16	17	18	18	19	20	20	21	21
	14.3	11	11	11	13	13	14	15	15	16	17	17	18	19	19	20	21	21	21
	14.8	11	12	12	13	14	14	15	16	16	17	18	18	19	20	20	21	22	22
	15.2	11	12	12	13	14	15	15	16	17	17	18	19	19	20	21	21	22	22
	15.7	12	12	12	14	14	15	16	16	17	18	18	19	20	20	21	22	22	22
	16.2	12	13	13	14	15	15	16	17	17	18	19	19	20	21	21	22	23	23
	16.7	12	13	13	14	15	16	16	17	18	18	19	20	20	21	22	22	23	23
	17.2	13	14	14	15	15	16	17	17	18	19	19	20	21	21	22	23	23	23
	17.7	13	14	14	15	16	16	17	18	18	19	20	20	21	22	22	23	24	24
	18.2	14	14	14	16	16	17	17	18	19	19	20	21	21	22	23	23	24	24
	18.7	14	15	15	16	17	17	18	18	19	20	20	21	22	22	23	24	24	24
	19.1	14	15	15	16	17	18	18	19	20	20	21	21	22	23	23	24	25	25
	19.6	15	15	15	17	17	18	19	19	20	21	21	22	22	23	24	24	25	25
	20.1	15	16	16	17	18	18	19	20	20	21	22	22	23	23	24	25	25	25
	20.6	15	16	16	17	18	19	19	20	21	21	22	23	23	24	25	25	26	26
	21.1	16	16	16	18	18	19	20	20	21	22	22	23	24	24	25	26	26	26
	21.6	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27
	22.1	16	17	17	18	19	20	20	21	22	22	23	24	24	25	26	26	27	27
	22.6	17	17	17	19	19	20	21	21	22	23	23	24	25	25	26	27	27	27
	23.0	17	18	18	19	20	20	21	22	22	23	24	24	25	26	26	27	28	28
	23.5	17	18	18	19	20	21	21	22	23	23	24	25	25	26	27	27	28	28
	24.0	18	19	19	20	20	21	22	22	23	24	24	25	26	26	27	28	28	28
	24.5	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27	28	29	29
	25.0	19	19	19	21	21	22	22	23	24	24	25	26	26	27	28	28	29	29

Multivariate model - Zinc

Worst-Case effluent discharge and average river flow

Zinc			Key	
Discharge rate	0.0066 m3/s	Worst case effluent flow rate	9.99	Concentrations below the AEPR freshwater limit (5 µg/L)
River flow rate	0.018 m3/s	Average flow rate	9.99	Concentrations above the AEPR freshwater limit (5 µg/L)
Effluent water min	1 µg/L			
Effluent water max	40 µg/L			
Receiving min	5 µg/L			
Receiving max	25 µg/L			
10m				

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	10
	5.5	5	5	5	6	6	7	7	7	7	8	8	8	8	9	9	9	10	10
	6.0	5	6	6	6	7	7	7	7	8	8	8	9	9	9	10	10	10	11
	6.5	6	6	6	7	7	7	8	8	8	9	9	9	9	10	10	10	11	11
	7.0	6	6	6	7	7	8	8	8	9	9	9	9	10	10	10	11	11	11
	7.4	7	7	7	8	8	8	9	9	9	10	10	10	10	10	11	11	11	12
	7.9	7	7	7	8	8	9	9	9	9	10	10	10	10	11	11	12	12	12
	8.4	7	8	8	8	9	9	9	9	10	10	10	11	11	11	12	12	12	13
	8.9	8	8	8	9	9	9	10	10	10	10	11	11	11	12	12	12	13	13
	9.4	8	9	9	9	10	10	10	10	11	11	11	12	12	12	13	13	13	13
	9.9	9	9	9	10	10	10	10	11	11	11	12	12	12	12	13	13	14	14
	10.4	9	9	9	10	10	11	11	11	11	12	12	12	13	13	13	14	14	14
	10.9	10	10	10	11	11	11	11	11	12	12	12	13	13	13	14	14	14	15
	11.3	10	10	10	11	11	12	12	12	12	13	13	13	14	14	14	15	15	15
	11.8	10	11	11	11	12	12	12	12	13	13	13	14	14	14	15	15	15	16
	12.3	11	11	11	12	12	12	13	13	13	14	14	14	15	15	15	16	16	16
	12.8	11	12	12	12	13	13	13	13	14	14	14	14	15	15	15	16	16	16
	13.3	12	12	12	13	13	13	14	14	14	14	15	15	15	16	16	16	17	17
	13.8	12	12	12	13	13	14	14	14	14	15	15	15	16	16	16	17	17	17
	14.3	12	13	13	13	14	14	14	14	15	15	15	16	16	16	17	17	17	18
	14.8	13	13	13	14	14	15	15	15	15	16	16	16	17	17	17	17	18	18
	15.2	13	14	14	14	15	15	15	15	16	16	16	17	17	17	18	18	18	19
	15.7	14	14	14	15	15	15	16	16	16	16	17	17	17	18	18	18	19	19
	16.2	14	15	15	15	15	16	16	16	16	17	17	17	18	18	18	19	19	19
	16.7	15	15	15	16	16	16	16	17	17	17	18	18	18	19	19	19	20	20
	17.2	15	15	15	16	16	17	17	17	17	18	18	18	18	19	19	20	20	20
	17.7	15	16	16	16	17	17	17	17	18	18	18	19	19	19	20	20	20	21
	18.2	16	16	16	17	17	18	18	18	18	19	19	19	19	20	20	20	21	21
	18.7	16	17	17	17	18	18	18	18	19	19	19	20	20	20	21	21	21	22
	19.1	17	17	17	18	18	18	19	19	19	19	20	20	20	20	21	21	22	22
	19.6	17	17	17	18	18	19	19	19	19	20	20	20	20	21	21	21	22	22
	20.1	18	18	18	19	19	19	20	20	20	20	20	21	21	21	22	22	22	23
20.6	18	18	18	19	19	20	20	20	20	21	21	21	22	22	22	23	23	23	
21.1	18	19	19	19	20	20	20	20	21	21	21	22	22	22	23	23	23	24	
21.6	19	19	19	20	20	20	21	21	21	22	22	22	23	23	23	24	24	24	
22.1	19	20	20	20	21	21	21	21	22	22	22	23	23	23	24	24	24	24	
22.6	20	20	20	21	21	21	22	22	22	23	23	23	24	24	24	25	25	25	
23.0	20	20	20	21	21	22	22	22	22	23	23	23	24	24	24	25	25	25	
23.5	21	21	21	21	22	22	22	22	23	23	23	24	24	24	25	25	25	26	
24.0	21	21	21	22	22	23	23	23	23	24	24	24	25	25	25	26	26	26	
24.5	21	22	22	22	23	23	23	23	24	24	24	25	25	25	26	26	26	27	
25.0	22	22	22	23	23	23	24	24	24	24	25	25	25	26	26	26	27	27	

Multivariate model - Zinc

Worst-Case effluent discharge and average river flow

Zinc

Discharge rate	0.0066 m3/s	Worst case effluent flow rate
River flow rate	0.018 m3/s	Average flow rate

Key

9.99	Concentrations below the AEPR freshwater limit (5 µg/L)
9.99	Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min	1 µg/L
Effluent water max	40 µg/L
Receiving min	5 µg/L
Receiving max	25 µg/L
20m	

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7
	5.5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	8	8
	6.0	6	6	6	6	6	6	6	7	7	7	7	7	7	8	8	8	8	8
	6.5	6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9
	7.0	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	9	9
	7.4	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	9	10
	7.9	7	8	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10
	8.4	8	8	8	8	9	9	9	9	9	9	9	10	10	10	10	10	10	11
	8.9	8	9	9	9	9	9	9	9	10	10	10	10	10	10	10	11	11	11
	9.4	9	9	9	9	9	10	10	10	10	10	10	10	10	11	11	11	11	11
	9.9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	11	11	12	12
	10.4	10	10	10	10	10	10	11	11	11	11	11	11	11	12	12	12	12	12
	10.9	10	10	10	10	11	11	11	11	11	12	12	12	12	12	12	12	13	13
	11.3	11	11	11	11	11	11	11	12	12	12	12	12	12	12	13	13	13	13
	11.8	11	11	11	12	12	12	12	12	12	12	13	13	13	13	13	13	14	14
	12.3	12	12	12	12	12	12	12	13	13	13	13	13	13	13	14	14	14	14
	12.8	12	12	12	13	13	13	13	13	13	13	13	13	14	14	14	14	14	15
	13.3	12	13	13	13	13	13	13	13	14	14	14	14	14	14	14	15	15	15
	13.8	13	13	13	13	14	14	14	14	14	14	14	14	15	15	15	15	15	16
	14.3	13	14	14	14	14	14	14	14	15	15	15	15	15	15	15	16	16	16
	14.8	14	14	14	14	14	15	15	15	15	15	15	15	15	16	16	16	16	16
	15.2	14	14	14	15	15	15	15	15	15	16	16	16	16	16	16	16	17	17
	15.7	15	15	15	15	15	16	16	16	16	16	16	16	16	17	17	17	17	17
	16.2	15	15	15	16	16	16	16	16	16	17	17	17	17	17	17	17	18	18
	16.7	16	16	16	16	16	16	16	17	17	17	17	17	17	17	18	18	18	18
	17.2	16	16	16	17	17	17	17	17	17	17	18	18	18	18	18	18	19	19
	17.7	17	17	17	17	17	17	17	18	18	18	18	18	18	18	19	19	19	19
	18.2	17	17	17	18	18	18	18	18	18	18	18	19	19	19	19	19	19	20
	18.7	17	18	18	18	18	18	18	18	19	19	19	19	19	19	19	20	20	20
	19.1	18	18	18	18	19	19	19	19	19	19	19	19	20	20	20	20	20	21
	19.6	18	19	19	19	19	19	19	19	19	20	20	20	20	20	20	21	21	21
	20.1	19	19	19	19	19	20	20	20	20	20	20	20	20	21	21	21	21	21
20.6	19	19	19	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	
21.1	20	20	20	20	20	21	21	21	21	21	21	21	21	22	22	22	22	22	
21.6	20	20	20	21	21	21	21	21	21	22	22	22	22	22	22	22	23	23	
22.1	21	21	21	21	21	21	21	22	22	22	22	22	22	22	23	23	23	23	
22.6	21	21	21	22	22	22	22	22	22	22	23	23	23	23	23	23	24	24	
23.0	22	22	22	22	22	22	22	23	23	23	23	23	23	23	24	24	24	24	
23.5	22	22	22	23	23	23	23	23	23	23	23	23	24	24	24	24	24	25	
24.0	22	23	23	23	23	23	23	23	24	24	24	24	24	24	25	25	25	25	
24.5	23	23	23	23	24	24	24	24	24	24	24	24	25	25	25	25	25	26	
25.0	23	24	24	24	24	24	24	24	25	25	25	25	25	25	25	26	26	26	

Worst-Case effluent discharge and average river flow

Key

9.99	Concentrations below the AEPR freshwater limit (5 µg/L)
9.99	Concentrations above the AEPR freshwater limit (5 µg/L)

40m

[illegible]

Multivariate model - Zinc

Average effluent discharge and average river flow

Zinc
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.018 m3/s Average flow rate

Key
9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
Effluent water max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L

Discharge point

		Effluent Zinc (µg/L)																	
		0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	6	7	7	8	9	9	10	10	11	11	12	12	13	13
	5.5	4	5	5	6	7	7	8	8	9	9	10	11	11	12	12	13	13	13
	6.0	5	5	5	7	7	8	8	9	9	10	10	11	11	12	13	13	14	14
	6.5	5	6	6	7	7	8	9	9	10	10	11	11	12	12	13	13	14	14
	7.0	6	6	6	7	8	8	9	9	10	11	11	12	12	13	13	14	14	14
	7.4	6	7	7	8	8	9	9	10	10	11	11	12	13	13	14	14	15	15
	7.9	6	7	7	8	9	9	10	10	11	11	12	12	13	14	14	15	15	15
	8.4	7	7	7	8	9	9	10	11	11	12	12	13	13	14	14	15	16	16
	8.9	7	8	8	9	9	10	10	11	12	12	13	13	14	14	15	15	16	16
	9.4	7	8	8	9	10	10	11	11	12	12	13	14	14	15	15	16	16	16
	9.9	8	8	8	10	10	11	11	12	12	13	13	14	14	15	16	16	17	17
	10.4	8	9	9	10	10	11	12	12	13	13	14	14	15	15	16	17	17	17
	10.9	9	9	9	10	11	11	12	12	13	14	14	15	15	16	16	17	17	17
	11.3	9	10	10	11	11	12	12	13	13	14	15	15	16	16	17	17	18	18
	11.8	9	10	10	11	12	12	13	13	14	14	15	15	16	17	17	18	18	18
	12.3	10	10	10	11	12	13	13	14	14	15	15	16	16	17	17	18	19	19
	12.8	10	11	11	12	12	13	13	14	15	15	16	16	17	17	18	18	19	19
	13.3	11	11	11	12	13	13	14	14	15	15	16	17	17	18	18	19	19	19
	13.8	11	11	11	13	13	14	14	15	15	16	16	17	17	18	19	19	20	20
	14.3	11	12	12	13	13	14	15	15	16	16	17	17	18	18	19	20	20	20
	14.8	12	12	12	13	14	14	15	16	16	17	17	18	18	19	19	20	20	20
	15.2	12	13	13	14	14	15	15	16	16	17	18	18	19	19	20	20	21	21
	15.7	12	13	13	14	15	15	16	16	17	17	18	18	19	20	20	21	21	21
	16.2	13	13	13	14	15	16	16	17	17	18	18	19	19	20	20	21	21	22
	16.7	13	14	14	15	15	16	16	17	18	18	19	19	20	20	21	21	22	22
	17.2	14	14	14	15	16	16	17	17	18	18	19	20	20	21	21	22	22	22
	17.7	14	14	14	16	16	17	17	18	18	19	19	20	21	21	22	22	23	23
	18.2	14	15	15	16	16	17	18	18	19	19	20	20	21	21	22	23	23	23
	18.7	15	15	15	16	17	17	18	19	19	20	20	21	21	22	22	23	23	23
	19.1	15	16	16	17	17	18	18	19	19	20	21	21	22	22	23	23	24	24
	19.6	15	16	16	17	18	18	19	19	20	20	21	21	22	23	23	24	24	24
	20.1	16	16	16	17	18	19	19	20	20	21	21	22	22	23	24	24	25	25
	20.6	16	17	17	18	18	19	19	20	21	21	22	22	23	23	24	24	25	25
	21.1	17	17	17	18	19	19	20	20	21	22	22	23	23	24	24	25	25	25
	21.6	17	17	17	19	19	20	20	21	21	22	22	23	24	24	25	25	26	26
	22.1	17	18	18	19	20	20	21	21	22	22	23	23	24	24	25	26	26	26
	22.6	18	18	18	19	20	20	21	22	22	23	23	24	24	25	25	26	26	26
	23.0	18	19	19	20	20	21	21	22	22	23	24	24	25	25	26	26	27	27
	23.5	18	19	19	20	21	21	22	22	23	23	24	25	25	26	26	27	27	27
	24.0	19	19	19	20	21	22	22	23	23	24	24	25	25	26	27	27	28	28
	24.5	19	20	20	21	21	22	23	23	24	24	25	25	26	26	27	27	28	28
	25.0	20	20	20	21	22	22	23	23	24	25	25	26	26	27	27	28	28	28

Multivariate model - Zinc

Average effluent discharge and average river flow

Zinc

Discharge rate 0.0053 m³/s Average effluent flow rate
 River flow rate 0.018 m³/s Average flow rate

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water
 min 1 µg/L
 Effluent water
 max 40 µg/L
 Receiving min 5 µg/L
 Receiving max 25 µg/L
 10m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9
	5.5	5	5	5	6	6	6	7	7	7	7	7	8	8	8	9	9	9	9
	6.0	5	6	6	6	7	7	7	7	8	8	8	8	8	9	9	9	10	10
	6.5	6	6	6	7	7	7	7	8	8	8	9	9	9	9	9	10	10	10
	7.0	6	7	7	7	7	8	8	8	8	8	9	9	9	10	10	10	10	11
	7.4	7	7	7	8	8	8	8	9	9	9	9	9	10	10	10	11	11	11
	7.9	7	7	7	8	8	9	9	9	9	10	10	10	10	10	11	11	11	12
	8.4	8	8	8	8	9	9	9	10	10	10	10	10	11	11	11	11	12	12
	8.9	8	8	8	9	9	9	10	10	10	10	10	11	11	11	12	12	12	12
	9.4	8	9	9	9	10	10	10	10	11	11	11	11	11	12	12	12	13	13
	9.9	9	9	9	10	10	10	11	11	11	11	11	12	12	12	12	13	13	13
	10.4	9	10	10	10	10	11	11	11	12	12	12	12	12	13	13	13	13	14
	10.9	10	10	10	11	11	11	11	12	12	12	12	12	13	13	13	14	14	14
	11.3	10	10	10	11	11	12	12	12	12	13	13	13	13	13	14	14	14	15
	11.8	11	11	11	11	12	12	12	13	13	13	13	13	14	14	14	14	15	15
	12.3	11	11	11	12	12	12	13	13	13	14	14	14	14	14	15	15	15	15
	12.8	11	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15	16	16
	13.3	12	12	12	13	13	13	14	14	14	14	14	15	15	15	15	16	16	16
	13.8	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17
	14.3	13	13	13	14	14	14	14	14	15	15	15	16	16	16	16	16	17	17
	14.8	13	13	13	14	14	14	15	15	15	15	16	16	16	16	17	17	17	18
	15.2	14	14	14	14	15	15	15	16	16	16	16	16	17	17	17	17	18	18
	15.7	14	14	14	15	15	15	16	16	16	16	17	17	17	17	18	18	18	18
	16.2	15	15	15	15	16	16	16	16	16	17	17	17	17	18	18	18	19	19
	16.7	15	15	15	16	16	16	17	17	17	17	17	18	18	18	18	19	19	19
	17.2	15	16	16	16	16	17	17	17	17	18	18	18	18	18	19	19	19	20
	17.7	16	16	16	17	17	17	17	17	18	18	18	18	19	19	19	19	20	20
	18.2	16	17	17	17	17	18	18	18	18	18	19	19	19	19	20	20	20	21
	18.7	17	17	17	17	18	18	18	18	19	19	19	19	19	20	20	20	21	21
	19.1	17	17	17	18	18	18	18	19	19	19	20	20	20	20	20	21	21	22
19.6	18	18	18	18	19	19	19	19	19	20	20	20	20	21	21	21	21	22	
20.1	18	18	18	19	19	19	20	20	20	20	20	20	21	21	21	22	22	22	
20.6	18	19	19	19	19	20	20	20	20	21	21	21	21	21	22	22	22	23	
21.1	19	19	19	20	20	20	20	20	21	21	21	21	22	22	22	22	23	23	
21.6	19	20	20	20	20	21	21	21	21	21	22	22	22	22	23	23	23	24	
22.1	20	20	20	21	21	21	21	21	22	22	22	22	22	23	23	23	24	24	
22.6	20	20	20	21	21	22	22	22	22	22	22	23	23	23	23	24	24	25	
23.0	21	21	21	21	22	22	22	22	22	23	23	23	23	24	24	24	24	25	
23.5	21	21	21	22	22	22	22	23	23	23	23	23	24	24	24	25	25	25	
24.0	21	22	22	22	23	23	23	23	23	24	24	24	24	24	25	25	25	26	
24.5	22	22	22	23	23	23	24	24	24	24	24	25	25	25	25	25	26	26	
25.0	22	23	23	23	23	24	24	24	24	24	25	25	25	26	26	26	26	27	

Average effluent discharge and average river flow

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

30m

		Effluent Zinc (µg/L)																		
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0	
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	
	5.5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	6.0	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	
	6.5	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	7.0	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	
	7.4	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	7.9	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	
	8.4	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	
	8.9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	
	9.4	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	
	9.9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	11
	10.4	10	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11
	10.9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12
	11.3	11	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12
	11.8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13
	12.3	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13
	12.8	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14
	13.3	13	13	13	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14
	13.8	13	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15
	14.3	14	14	14	14	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15
	14.8	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	15.2	15	15	15	15	15	15	15	15	15	15	15	16	16	16	16	16	16	16	16
	15.7	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	16.2	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	17	17	17
	16.7	16	16	16	16	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17
17.2	17	17	17	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	
17.7	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	
18.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	19	
18.7	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	
19.1	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	
19.6	19	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	
20.1	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	21	21	21	
20.6	20	20	20	20	20	20	20	20	20	21	21	21	21	21	21	21	21	21	21	
21.1	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	22	22	
21.6	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	
22.1	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	23	
22.6	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	
23.0	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	24	
23.5	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	
24.0	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
24.5	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25	25	25	25	
25.0	24	24	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	

Average effluent discharge and average river flow

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

40m

[illegible]

Multivariate model - Zinc

Worst-case effluent discharge and median river flow

Zinc

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0072 m³/s Median

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water
 min 1 µg/L
 Effluent water
 max 40 µg/L
 Receiving min 5 µg/L
 Receiving max 25 µg/L

Discharge point

		Effluent Zinc (µg/L)																	
		0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	3	4	4	7	8	9	10	11	12	14	15	16	17	18	19	21	21	22
	5.5	3	5	5	7	8	9	10	12	13	14	15	16	17	18	20	21	21	22
	6.0	4	5	5	7	8	9	11	12	13	14	15	16	18	19	20	21	21	22
	6.5	4	5	5	7	9	10	11	12	13	14	16	17	18	19	20	21	21	23
	7.0	4	5	5	8	9	10	11	12	13	15	16	17	18	19	20	22	22	23
	7.4	4	6	6	8	9	10	11	13	14	15	16	17	18	20	21	22	22	23
	7.9	5	6	6	8	9	10	12	13	14	15	16	17	19	20	21	22	22	23
	8.4	5	6	6	8	10	11	12	13	14	15	17	18	19	20	21	22	22	24
	8.9	5	6	6	9	10	11	12	13	14	16	17	18	19	20	21	23	23	24
	9.4	5	7	7	9	10	11	12	14	15	16	17	18	19	21	22	23	23	24
	9.9	6	7	7	9	10	11	13	14	15	16	17	18	20	21	22	23	23	24
	10.4	6	7	7	9	11	12	13	14	15	16	18	19	20	21	22	23	23	25
	10.9	6	7	7	10	11	12	13	14	15	17	18	19	20	21	22	24	24	25
	11.3	6	8	8	10	11	12	13	15	16	17	18	19	20	22	23	24	24	25
	11.8	7	8	8	10	11	12	14	15	16	17	18	19	21	22	23	24	24	25
	12.3	7	8	8	10	12	13	14	15	16	17	19	20	21	22	23	24	24	26
	12.8	7	8	8	11	12	13	14	15	16	18	19	20	21	22	23	25	25	26
	13.3	7	9	9	11	12	13	14	16	17	18	19	20	21	23	24	25	25	26
	13.8	8	9	9	11	12	13	15	16	17	18	19	20	22	23	24	25	25	26
	14.3	8	9	9	11	13	14	15	16	17	18	20	21	22	23	24	25	25	27
	14.8	8	9	9	12	13	14	15	16	18	19	20	21	22	23	24	26	26	27
	15.2	8	10	10	12	13	14	15	17	18	19	20	21	22	24	25	26	26	27
	15.7	9	10	10	12	13	15	16	17	18	19	20	22	23	24	25	26	26	27
	16.2	9	10	10	12	14	15	16	17	18	19	21	22	23	24	25	26	26	28
	16.7	9	10	10	13	14	15	16	17	19	20	21	22	23	24	26	27	27	28
	17.2	9	11	11	13	14	15	16	18	19	20	21	22	23	25	26	27	27	28
	17.7	10	11	11	13	14	16	17	18	19	20	21	23	24	25	26	27	27	28
	18.2	10	11	11	13	15	16	17	18	19	20	22	23	24	25	26	27	27	29
	18.7	10	11	11	14	15	16	17	18	20	21	22	23	24	25	27	28	28	29
	19.1	10	12	12	14	15	16	17	19	20	21	22	23	24	26	27	28	28	29
	19.6	11	12	12	14	15	17	18	19	20	21	22	24	25	26	27	28	28	29
	20.1	11	12	12	14	16	17	18	19	20	21	23	24	25	26	27	28	28	30
20.6	11	12	12	15	16	17	18	19	21	22	23	24	25	26	28	29	29	30	
21.1	11	13	13	15	16	17	18	20	21	22	23	24	25	27	28	29	29	30	
21.6	12	13	13	15	16	18	19	20	21	22	23	25	26	27	28	29	29	30	
22.1	12	13	13	15	17	18	19	20	21	22	24	25	26	27	28	29	29	31	
22.6	12	13	13	16	17	18	19	20	22	23	24	25	26	27	29	30	30	31	
23.0	13	14	14	16	17	18	19	21	22	23	24	25	26	28	29	30	30	31	
23.5	13	14	14	16	17	19	20	21	22	23	24	26	27	28	29	30	30	31	
24.0	13	14	14	17	18	19	20	21	22	24	25	26	27	28	29	30	30	32	
24.5	13	14	14	17	18	19	20	21	23	24	25	26	27	28	30	31	31	32	
25.0	14	15	15	17	18	19	21	22	23	24	25	26	28	29	30	31	31	32	

Multivariate model - Zinc

Worst-case effluent discharge and median river flow

Zinc

Discharge rate0.0066 m3/s

River flow rate0.0072 m3/s

Worst case effluent flow rate

Median

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min

1 µg/L

Effluent water max

40 µg/L

Receiving min

5 µg/L

Receiving max

25 µg/L

10m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	6	7	8	8	9	9	10	10	10	11	12	12	13	13
	5.5	4	5	5	6	7	7	8	8	9	10	10	10	11	11	12	13	13	14
	6.0	5	5	5	7	7	8	8	9	9	10	11	11	11	12	12	13	14	14
	6.5	5	6	6	7	7	8	9	9	10	10	11	12	12	13	13	14	14	14
	7.0	6	6	6	7	8	8	9	10	10	11	11	12	13	13	14	14	15	15
	7.4	6	6	6	8	8	9	9	10	11	11	12	12	13	13	14	15	15	15
	7.9	6	7	7	8	9	9	10	10	11	12	12	13	13	14	14	15	16	16
	8.4	7	7	7	8	9	10	10	11	11	12	12	13	14	14	15	15	16	16
	8.9	7	8	8	9	9	10	11	11	12	12	13	13	14	15	15	16	16	16
	9.4	7	8	8	9	10	10	11	11	12	13	13	14	14	15	16	16	17	17
	9.9	8	8	8	10	10	11	11	12	12	13	14	14	15	15	16	16	17	17
	10.4	8	9	9	10	10	11	12	12	13	13	14	15	15	16	16	17	17	17
	10.9	8	9	9	10	11	11	12	13	13	14	14	15	15	16	16	17	17	18
	11.3	9	9	9	11	11	12	12	13	14	14	15	15	16	16	17	18	18	18
	11.8	9	10	10	11	12	12	13	13	14	14	15	16	16	17	17	18	19	19
	12.3	10	10	10	11	12	13	13	14	14	15	15	16	17	17	18	18	19	19
	12.8	10	11	11	12	12	13	13	14	15	15	16	16	17	18	18	19	19	19
	13.3	10	11	11	12	12	13	13	14	15	16	16	17	17	18	19	19	20	20
	13.8	11	11	11	12	13	14	14	15	15	16	17	17	18	18	19	19	20	20
	14.3	11	12	12	13	13	14	15	15	16	16	17	18	18	19	19	20	20	20
	14.8	11	12	12	13	14	14	15	16	16	17	17	18	18	19	20	20	21	21
	15.2	12	12	12	14	14	15	15	16	17	17	18	18	19	19	20	21	21	21
	15.7	12	13	13	14	15	15	16	16	17	17	18	19	19	20	20	21	22	22
	16.2	13	13	13	14	15	15	16	17	17	18	18	19	20	20	21	21	22	22
	16.7	13	14	14	15	15	16	16	17	18	18	19	19	20	21	21	22	22	22
	17.2	13	14	14	15	16	16	17	17	18	19	19	20	20	21	21	22	23	23
	17.7	14	14	14	15	16	17	17	18	18	19	20	20	21	21	22	22	23	23
	18.2	14	15	15	16	16	17	18	18	19	19	20	20	21	22	22	23	24	24
	18.7	14	15	15	16	17	17	18	19	19	20	20	21	21	22	23	23	24	24
	19.1	15	15	15	17	17	18	18	19	19	20	21	21	22	22	23	24	24	24
	19.6	15	16	16	17	18	18	19	19	20	20	21	22	22	23	23	24	25	25
	20.1	16	16	16	17	18	18	19	20	20	21	21	22	23	23	24	24	25	25
20.6	16	17	17	18	18	19	19	20	21	21	22	22	23	23	24	25	25	25	
21.1	16	17	17	18	19	19	20	20	21	22	22	23	23	24	24	25	26	26	
21.6	17	17	17	18	19	20	20	21	21	22	22	23	24	24	25	25	26	26	
22.1	17	18	18	19	19	20	21	21	22	22	23	23	24	25	25	26	27	27	
22.6	17	18	18	19	20	20	21	21	22	23	23	24	24	25	26	26	27	27	
23.0	18	18	18	20	20	21	21	22	22	23	24	24	25	25	26	27	27	27	
23.5	18	19	19	20	20	21	22	22	23	23	24	25	25	26	26	27	27	27	
24.0	19	19	19	20	21	21	22	23	23	24	24	25	26	26	27	27	28	28	
24.5	19	19	19	21	21	22	22	23	24	24	25	25	26	26	27	28	28	28	
25.0	19	20	20	21	22	22	23	23	24	25	25	26	26	27	27	28	28	29	

Multivariate model - Zinc

Worst-case effluent discharge and median river flow

Zinc

Discharge rate0.0066 m3/s

River flow rate0.0072 m3/s

Worst case effluent flow rate

Median

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min1 µg/L

Effluent water max40 µg/L

Receiving min5 µg/L

Receiving max25 µg/L

20m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	9	9	9
	5.5	5	5	5	6	6	6	7	7	7	7	8	8	8	8	9	9	9	10
	6.0	5	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10
	6.5	6	6	6	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10
	7.0	6	7	7	7	7	8	8	8	9	9	9	9	9	10	10	10	11	11
	7.4	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11
	7.9	7	7	7	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12
	8.4	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	12	12	12
	8.9	8	8	8	9	9	9	10	10	10	10	11	11	11	11	12	12	12	13
	9.4	8	9	9	9	10	10	10	10	10	11	11	11	12	12	12	12	13	13
	9.9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	13	13	13	13
	10.4	9	10	10	10	10	10	11	11	11	12	12	12	12	13	13	13	14	14
	10.9	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14
	11.3	10	10	10	11	11	12	12	12	12	12	13	13	13	14	14	14	14	15
	11.8	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	15	15	15
	12.3	11	11	11	12	12	12	12	13	13	13	14	14	14	14	15	15	15	16
	12.8	11	12	12	12	13	13	13	13	13	14	14	14	15	15	15	15	16	16
	13.3	12	12	12	12	13	13	13	14	14	14	14	15	15	15	15	16	16	16
	13.8	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	17	17
	14.3	13	13	13	14	14	14	14	14	15	15	15	16	16	16	16	17	17	17
	14.8	13	13	13	14	14	15	15	15	15	15	16	16	16	17	17	17	17	18
	15.2	14	14	14	14	15	15	15	16	16	16	16	16	17	17	17	18	18	18
	15.7	14	14	14	15	15	15	16	16	16	16	17	17	17	17	18	18	18	19
	16.2	14	15	15	15	16	16	16	16	16	17	17	17	18	18	18	18	19	19
	16.7	15	15	15	16	16	16	16	17	17	17	17	18	18	18	19	19	19	19
	17.2	15	16	16	16	16	17	17	17	17	18	18	18	18	19	19	19	20	20
	17.7	16	16	16	17	17	17	17	17	18	18	18	19	19	19	19	20	20	20
	18.2	16	16	16	17	17	18	18	18	18	18	19	19	19	20	20	20	20	21
	18.7	17	17	17	17	18	18	18	18	19	19	19	19	20	20	20	21	21	21
	19.1	17	17	17	18	18	18	18	19	19	19	20	20	20	20	21	21	21	22
19.6	17	18	18	18	19	19	19	19	19	20	20	20	21	21	21	21	22	22	
20.1	18	18	18	19	19	19	20	20	20	20	20	21	21	21	22	22	22	22	
20.6	18	19	19	19	19	20	20	20	20	21	21	21	21	22	22	22	23	23	
21.1	19	19	19	20	20	20	20	20	21	21	21	22	22	22	22	23	23	23	
21.6	19	19	19	20	20	21	21	21	21	22	22	22	22	23	23	23	24	24	
22.1	20	20	20	20	21	21	21	21	22	22	22	22	23	23	23	24	24	24	
22.6	20	20	20	21	21	21	22	22	22	22	23	23	23	24	24	24	25	25	
23.0	20	21	21	21	22	22	22	22	22	23	23	23	24	24	24	25	25	25	
23.5	21	21	21	22	22	22	23	23	23	23	24	24	24	24	25	25	25	26	
24.0	21	22	22	22	22	23	23	23	23	24	24	24	24	25	25	25	26	26	
24.5	22	22	22	23	23	23	23	24	24	24	25	25	25	25	26	26	26	26	
25.0	22	22	22	23	23	24	24	24	24	25	25	25	25	26	26	26	27	27	

Worst-case effluent discharge and median river flow

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

40m

		Effluent Zinc (µg/L)																
0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0	
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	
	5.5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	
	6.0	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	
	6.5	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	
	7.0	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	
	7.4	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	
	7.9	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	
	8.4	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	
	8.9	9	9	9	9	9	9	9	9	9	9	9	9	10	10	10	10	
	9.4	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	
	9.9	10	10	10	10	10	10	10	10	10	10	10	10	10	11	11	11	
	10.4	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	
	10.9	11	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12	
	11.3	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	
	11.8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13	
	12.3	12	12	12	12	12	12	12	12	13	13	13	13	13	13	13	13	
	12.8	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	14	
	13.3	13	13	13	13	13	13	13	13	14	14	14	14	14	14	14	14	
	13.8	13	13	13	14	14	14	14	14	14	14	14	14	14	14	14	15	
	14.3	14	14	14	14	14	14	14	14	14	15	15	15	15	15	15	15	
	14.8	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	16	
	15.2	15	15	15	15	15	15	15	15	15	15	16	16	16	16	16	16	
	15.7	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	
	16.2	16	16	16	16	16	16	16	16	16	16	16	17	17	17	17	17	
	16.7	16	16	16	16	17	17	17	17	17	17	17	17	17	17	17	17	
	17.2	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	
	17.7	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	
	18.2	18	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	
18.7	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19		
19.1	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20		
19.6	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20		
20.1	20	20	20	20	20	20	20	20	20	20	20	20	20	20	21	21		
20.6	20	20	20	20	20	20	20	21	21	21	21	21	21	21	21	21		
21.1	20	21	21	21	21	21	21	21	21	21	21	21	21	21	22	22		
21.6	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22		
22.1	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23		
22.6	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23		
23.0	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23	23		
23.5	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24		
24.0	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24		
24.5	24	24	24	24	24	24	24	24	24	24	25	25	25	25	25	25		
25.0	24	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25		

Multivariate model - zinc

Average effluent discharge and median river flow

Zinc
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.0072 m3/s Median

Key
9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water
min 1 µg/L
Effluent water
max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L

Discharge point																			
		Effluent Zinc (µg/L)																	
	0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0	
Receiving Water Zinc (µg/L)	5.0	3	4	4	6	7	8	9	11	12	13	14	15	16	17	18	19	20	
	5.5	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	6.0	4	5	5	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	6.5	4	5	5	7	8	9	10	11	12	13	14	15	16	18	19	20	21	
	7.0	4	5	5	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	7.4	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	7.9	5	6	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	8.4	5	6	6	8	9	10	11	12	14	15	16	17	18	19	20	21	22	
	8.9	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	9.4	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	9.9	6	7	7	9	10	11	12	13	14	15	16	17	18	19	21	22	23	
	10.4	6	7	7	9	11	12	13	14	15	16	17	18	19	20	21	22	23	
	10.9	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	11.3	7	8	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	11.8	7	8	8	10	11	12	13	14	15	17	18	19	20	21	22	23	24	
	12.3	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	12.8	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	13.3	8	9	9	11	12	13	14	15	16	17	18	19	20	21	22	24	25	
	13.8	8	9	9	11	13	14	15	16	17	18	19	20	21	22	23	24	25	
	14.3	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	14.8	9	10	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	15.2	9	10	10	12	13	14	15	16	17	18	20	21	22	23	24	25	26	
	15.7	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	16.2	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	16.7	10	11	11	13	14	15	16	17	18	19	20	21	22	23	24	26	27	
	17.2	10	11	11	13	14	16	17	18	19	20	21	22	23	24	25	26	27	
	17.7	11	12	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
	18.2	11	12	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
	18.7	11	12	12	14	15	16	17	18	19	20	21	23	24	25	26	27	28	
	19.1	11	13	13	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
	19.6	12	13	13	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
	20.1	12	13	13	15	16	17	18	19	20	21	22	23	24	25	26	27	29	
20.6	12	13	13	15	16	17	19	20	21	22	23	24	25	26	27	28	29		
21.1	13	14	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
21.6	13	14	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
22.1	13	14	14	16	17	18	19	20	21	22	23	24	26	27	28	29	30		
22.6	13	14	14	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
23.0	14	15	15	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
23.5	14	15	15	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
24.0	14	15	15	17	18	19	20	22	23	24	25	26	27	28	29	30	31		
24.5	15	16	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
25.0	15	16	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31		

Multivariate model - zinc

Average effluent discharge and median river flow

Zinc

Discharge rate

River flow rate

0.0053 m3/s

0.0072 m3/s

Average effluent flow rate

Median

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min

Effluent water max

Receiving min

Receiving max

1 µg/L

40 µg/L

5 µg/L

25 µg/L

10m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	6	7	7	8	8	9	9	10	10	10	11	11	12	12
	5.5	5	5	5	6	7	7	8	8	9	9	10	10	10	11	11	12	12	13
	6.0	5	5	5	6	7	7	8	9	9	10	10	10	11	11	12	12	13	13
	6.5	5	6	6	7	7	8	8	9	9	10	10	10	11	11	12	13	13	14
	7.0	6	6	6	7	8	8	9	9	10	10	10	11	11	12	12	13	13	14
	7.4	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	14
	7.9	6	7	7	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15
	8.4	7	7	7	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15
	8.9	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15	15
	9.4	8	8	8	9	10	10	11	11	12	12	13	13	13	14	14	15	15	16
	9.9	8	9	9	10	10	11	11	12	12	13	13	13	14	14	15	15	16	16
	10.4	8	9	9	10	10	11	11	12	13	13	14	14	14	15	15	16	16	17
	10.9	9	9	9	10	11	11	12	12	13	13	14	14	14	15	15	16	16	17
	11.3	9	10	10	11	11	12	12	13	13	14	14	14	15	15	16	16	17	17
	11.8	10	10	10	11	12	12	13	13	14	14	15	15	16	16	17	17	18	18
	12.3	10	10	10	11	12	13	13	14	14	15	15	16	16	17	17	18	18	19
	12.8	10	11	11	12	12	13	13	14	14	15	15	16	16	17	18	18	19	19
	13.3	11	11	11	12	13	13	14	14	15	15	16	16	17	17	18	18	19	19
	13.8	11	12	12	13	13	14	14	15	15	16	16	17	17	18	18	19	19	20
	14.3	11	12	12	13	14	14	15	15	16	16	17	17	18	18	19	19	20	20
	14.8	12	12	12	13	14	14	15	15	16	16	17	17	18	18	19	19	20	20
	15.2	12	13	13	14	14	15	15	16	16	17	17	18	18	19	19	20	20	21
	15.7	13	13	13	14	15	15	16	16	17	17	18	18	19	19	20	20	21	21
	16.2	13	14	14	15	15	16	16	17	17	18	18	19	19	20	20	21	21	22
	16.7	13	14	14	15	15	16	16	17	18	18	19	19	20	20	21	21	22	22
	17.2	14	14	14	15	16	16	17	17	18	18	19	19	20	20	21	21	22	22
	17.7	14	15	15	16	16	17	17	18	18	19	19	20	20	21	21	22	22	23
	18.2	15	15	15	16	17	17	18	18	19	19	20	20	21	21	22	22	23	23
	18.7	15	15	15	16	17	18	18	19	19	20	20	21	21	22	22	23	23	24
	19.1	15	16	16	17	17	18	18	19	19	20	20	21	21	22	22	23	23	24
	19.6	16	16	16	17	18	18	19	19	20	20	21	21	22	22	23	23	24	24
	20.1	16	17	17	18	18	19	19	20	20	21	21	22	22	23	23	24	24	25
20.6	16	17	17	18	19	19	20	20	21	21	22	22	23	23	24	24	25	25	
21.1	17	17	17	18	19	19	20	20	21	21	22	22	23	23	24	24	25	25	
21.6	17	18	18	19	19	20	20	21	21	22	22	23	23	24	24	25	25	26	
22.1	18	18	18	19	20	20	21	21	22	22	23	23	24	24	25	25	26	26	
22.6	18	19	19	20	20	21	21	22	22	23	23	24	24	25	25	26	26	27	
23.0	18	19	19	20	20	21	21	22	23	23	24	24	25	25	26	26	27	27	
23.5	19	19	19	20	21	21	22	22	23	23	24	24	25	25	26	26	27	27	
24.0	19	20	20	21	21	22	22	23	23	24	24	25	25	26	26	27	27	28	
24.5	20	20	20	21	22	22	23	23	24	24	25	25	26	26	27	27	28	28	
25.0	20	20	20	21	22	23	23	24	24	25	25	26	26	27	27	28	28	28	

Multivariate model - zinc

Average effluent discharge and median river flow

Zinc
Discharge rate 0.0053 m3/s Average effluent flow rate
River flow rate 0.0072 m3/s Median

Key
9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
Effluent water max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L
20m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	6	6	6	6	7	7	7	7	7	8	8	8	8	9
	5.5	5	5	5	6	6	6	7	7	7	7	7	8	8	8	8	9	9	9
	6.0	5	6	6	6	6	7	7	7	8	8	8	8	8	9	9	9	9	10
	6.5	6	6	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10
	7.0	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10	10	10
	7.4	7	7	7	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11
	7.9	7	7	7	8	8	8	8	9	9	9	10	10	10	10	11	11	11	11
	8.4	8	8	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11	12
	8.9	8	8	8	9	9	9	10	10	10	10	11	11	11	11	11	12	12	12
	9.4	9	9	9	9	10	10	10	10	11	11	11	11	11	12	12	12	12	13
	9.9	9	9	9	10	10	10	10	11	11	11	12	12	12	12	12	13	13	13
	10.4	9	10	10	10	10	11	11	11	11	12	12	12	12	12	13	13	13	13
	10.9	10	10	10	11	11	11	11	12	12	12	12	12	13	13	13	13	14	14
	11.3	10	11	11	11	11	12	12	12	12	13	13	13	13	13	14	14	14	14
	11.8	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15
	12.3	11	11	11	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15
	12.8	12	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15	15	16
	13.3	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16
	13.8	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17
	14.3	13	13	13	14	14	14	14	14	15	15	15	15	16	16	16	16	17	17
	14.8	13	14	14	14	14	15	15	15	15	16	16	16	16	16	17	17	17	17
	15.2	14	14	14	15	15	15	15	16	16	16	16	16	17	17	17	17	18	18
	15.7	14	14	14	15	15	15	16	16	16	16	16	17	17	17	18	18	18	18
	16.2	15	15	15	16	16	16	16	16	17	17	17	17	17	18	18	18	18	19
	16.7	15	15	15	16	16	16	16	17	17	17	17	18	18	18	18	19	19	19
	17.2	15	16	16	16	17	17	17	17	17	18	18	18	18	19	19	19	19	20
	17.7	16	16	16	17	17	17	17	17	18	18	18	18	19	19	19	20	20	20
	18.2	16	17	17	17	17	18	18	18	18	19	19	19	19	19	20	20	20	20
	18.7	17	17	17	18	18	18	18	18	19	19	19	19	20	20	20	20	21	21
	19.1	17	17	17	18	18	19	19	19	19	19	20	20	20	20	21	21	21	21
19.6	18	18	18	18	19	19	19	19	19	20	20	20	20	21	21	21	22	22	
20.1	18	18	18	19	19	19	20	20	20	20	20	21	21	21	21	22	22	22	
20.6	19	19	19	19	20	20	20	20	20	21	21	21	21	22	22	22	22	23	
21.1	19	19	19	20	20	20	21	21	21	21	21	22	22	22	22	23	23	23	
21.6	19	20	20	20	20	21	21	21	21	22	22	22	22	23	23	23	23	24	
22.1	20	20	20	21	21	21	21	22	22	22	22	22	23	23	23	23	24	24	
22.6	20	21	21	21	21	22	22	22	22	22	23	23	23	23	24	24	24	24	
23.0	21	21	21	21	22	22	22	23	23	23	23	23	24	24	24	24	25	25	
23.5	21	21	21	22	22	22	23	23	23	23	23	24	24	24	25	25	25	25	
24.0	22	22	22	22	23	23	23	23	24	24	24	24	24	25	25	25	25	26	
24.5	22	22	22	23	23	23	24	24	24	24	24	25	25	25	25	26	26	26	
25.0	22	23	23	23	23	24	24	24	24	25	25	25	25	26	26	26	26	27	

Average effluent discharge and median river flow

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

40m

[illegible]

Multivariate model - Zinc

Worst-case effluent discharge and Q20 river flow

Zinc

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
 Effluent water max 40 µg/L
 Receiving min 5 µg/L
 Receiving max 25 µg/L

Discharge point

		Effluent Zinc (µg/L)																	
0.0		1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0	
Receiving Water Zinc (µg/L)	5.0	2	4	4	7	9	11	13	14	16	18	20	22	23	25	27	29	30	
	5.5	2	4	4	8	9	11	13	15	16	18	20	22	23	25	27	29	31	
	6.0	2	4	4	8	9	11	13	15	17	18	20	22	24	25	27	29	31	
	6.5	3	4	4	8	10	11	13	15	17	18	20	22	24	25	27	29	31	
	7.0	3	4	4	8	10	11	13	15	17	19	20	22	24	26	27	29	31	
	7.4	3	5	5	8	10	12	13	15	17	19	20	22	24	26	28	29	31	
	7.9	3	5	5	8	10	12	14	15	17	19	21	22	24	26	28	29	31	
	8.4	3	5	5	8	10	12	14	15	17	19	21	22	24	26	28	30	31	
	8.9	3	5	5	8	10	12	14	16	17	19	21	23	24	26	28	30	31	
	9.4	3	5	5	9	10	12	14	16	17	19	21	23	25	26	28	30	32	
	9.9	3	5	5	9	11	12	14	16	18	19	21	23	25	26	28	30	32	
	10.4	4	5	5	9	11	12	14	16	18	19	21	23	25	27	28	30	32	
	10.9	4	5	5	9	11	13	14	16	18	20	21	23	25	27	28	30	32	
	11.3	4	6	6	9	11	13	14	16	18	20	22	23	25	27	29	30	32	
	11.8	4	6	6	9	11	13	15	16	18	20	22	23	25	27	29	30	32	
	12.3	4	6	6	9	11	13	15	16	18	20	22	24	25	27	29	31	32	
	12.8	4	6	6	10	11	13	15	17	18	20	22	24	25	27	29	31	33	
	13.3	4	6	6	10	11	13	15	17	19	20	22	24	26	27	29	31	33	
	13.8	5	6	6	10	12	13	15	17	19	20	22	24	26	27	29	31	33	
	14.3	5	6	6	10	12	13	15	17	19	21	22	24	26	28	29	31	33	
	14.8	5	7	7	10	12	14	15	17	19	21	22	24	26	28	30	31	33	
	15.2	5	7	7	10	12	14	16	17	19	21	23	24	26	28	30	31	33	
	15.7	5	7	7	10	12	14	16	17	19	21	23	24	26	28	30	32	33	
	16.2	5	7	7	10	12	14	16	18	19	21	23	25	26	28	30	32	33	
	16.7	5	7	7	11	12	14	16	18	19	21	23	25	27	28	30	32	34	
	17.2	5	7	7	11	13	14	16	18	20	21	23	25	27	28	30	32	34	
	17.7	6	7	7	11	13	14	16	18	20	21	23	25	27	29	30	32	34	
	18.2	6	7	7	11	13	15	16	18	20	22	23	25	27	29	30	32	34	
	18.7	6	8	8	11	13	15	16	18	20	22	24	25	27	29	31	32	34	
	19.1	6	8	8	11	13	15	17	18	20	22	24	25	27	29	31	33	34	
	19.6	6	8	8	11	13	15	17	18	20	22	24	26	27	29	31	33	34	
	20.1	6	8	8	12	13	15	17	19	20	22	24	26	27	29	31	33	35	
	20.6	6	8	8	12	13	15	17	19	21	22	24	26	28	29	31	33	35	
	21.1	7	8	8	12	14	15	17	19	21	22	24	26	28	30	31	33	35	
	21.6	7	8	8	12	14	15	17	19	21	23	24	26	28	30	31	33	35	
	22.1	7	9	9	12	14	16	17	19	21	23	24	26	28	30	32	33	35	
22.6	7	9	9	12	14	16	18	19	21	23	25	26	28	30	32	33	35		
23.0	7	9	9	12	14	16	18	19	21	23	25	27	28	30	32	34	35		
23.5	7	9	9	12	14	16	18	20	21	23	25	27	28	30	32	34	35		
24.0	7	9	9	13	14	16	18	20	21	23	25	27	29	30	32	34	36		
24.5	7	9	9	13	15	16	18	20	22	23	25	27	29	30	32	34	36		
25.0	8	9	9	13	15	16	18	20	22	24	25	27	29	31	32	34	36		

Multivariate model - Zinc

Worst-case effluent discharge and Q20 river flow

Zinc

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L

Effluent water max 40 µg/L

Receiving min 5 µg/L

Receiving max 25 µg/L

10m

		Effluent Zinc (µg/L)																
Receiving Water Zinc (µg/L)	0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
	5.0	4	4	4	6	7	8	9	10	11	12	12	13	14	15	16	17	18
	5.5	4	5	5	7	7	8	9	10	11	12	13	14	14	15	16	17	18
	6.0	4	5	5	7	8	9	9	10	11	12	13	14	15	16	17	17	18
	6.5	4	5	5	7	8	9	10	11	12	12	13	14	15	16	17	18	19
	7.0	5	6	6	7	8	9	10	11	12	13	14	15	15	16	17	18	19
	7.4	5	6	6	8	9	10	10	11	12	13	14	15	16	17	17	18	19
	7.9	5	6	6	8	9	10	11	12	12	13	14	15	16	17	18	19	20
	8.4	6	7	7	8	9	10	11	12	13	14	15	15	16	17	18	19	20
	8.9	6	7	7	9	10	10	11	12	13	14	15	16	17	18	18	19	20
	9.4	6	7	7	9	10	11	12	13	13	14	15	16	17	18	19	20	20
	9.9	7	8	8	9	10	11	12	13	14	15	15	16	17	18	19	20	21
	10.4	7	8	8	10	11	11	12	13	14	15	16	17	18	18	19	20	21
	10.9	7	8	8	10	11	12	13	13	14	15	16	17	18	19	20	21	21
	11.3	8	8	8	10	11	12	13	14	15	16	16	17	18	19	20	21	22
	11.8	8	9	9	11	11	12	13	14	15	16	17	18	19	19	20	21	22
	12.3	8	9	9	11	12	13	14	14	15	16	17	18	19	20	21	21	22
	12.8	9	9	9	11	12	13	14	15	16	16	17	18	19	20	21	22	23
	13.3	9	10	10	11	12	13	14	15	16	17	18	19	19	20	21	22	23
	13.8	9	10	10	12	13	14	14	15	16	17	18	19	20	21	22	22	23
	14.3	9	10	10	12	13	14	15	16	17	17	18	19	20	21	22	23	24
	14.8	10	11	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24
	15.2	10	11	11	13	14	14	15	16	17	18	19	20	21	22	22	23	24
	15.7	10	11	11	13	14	15	16	17	17	18	19	20	21	22	23	24	25
	16.2	11	12	12	13	14	15	16	17	18	19	20	20	21	22	23	24	25
	16.7	11	12	12	14	15	15	16	17	18	19	20	21	22	23	23	24	25
	17.2	11	12	12	14	15	16	17	18	18	19	20	21	22	23	24	25	25
	17.7	12	13	13	14	15	16	17	18	19	20	20	21	22	23	24	25	26
	18.2	12	13	13	15	15	16	17	18	19	20	21	22	23	23	24	25	26
	18.7	12	13	13	15	16	17	18	18	19	20	21	22	23	24	25	26	26
	19.1	13	13	13	15	16	17	18	19	20	21	21	22	23	24	25	26	27
	19.6	13	14	14	16	16	17	18	19	20	21	22	23	23	24	25	26	27
	20.1	13	14	14	16	17	18	18	19	20	21	22	23	24	25	26	26	27
	20.6	13	14	14	16	17	18	19	20	21	21	22	23	24	25	26	27	28
	21.1	14	15	15	16	17	18	19	20	21	22	23	24	24	25	26	27	28
	21.6	14	15	15	17	18	19	19	20	21	22	23	24	25	26	26	27	28
	22.1	14	15	15	17	18	19	20	21	22	22	23	24	25	26	27	28	29
	22.6	15	16	16	17	18	19	20	21	22	23	24	24	25	26	27	28	29
	23.0	15	16	16	18	19	19	20	21	22	23	24	25	26	27	27	28	29
	23.5	15	16	16	18	19	20	21	22	22	23	24	25	26	27	28	29	30
	24.0	16	17	17	18	19	20	21	22	23	24	25	25	26	27	28	29	30
	24.5	16	17	17	19	20	20	21	22	23	24	25	26	27	27	28	29	30
	25.0	16	17	17	19	20	21	22	22	23	24	25	26	27	28	29	30	30

Multivariate model - Zinc

Worst-case effluent discharge and Q20 river flow

Zinc

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L

Effluent water max 40 µg/L

Receiving min 5 µg/L

Receiving max 25 µg/L

20m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	6	6	7	7	8	8	9	9	10	10	10	11	11	11
	5.5	5	5	5	6	6	7	7	8	8	9	9	10	10	10	10	11	11	12
	6.0	5	6	6	6	7	7	8	8	9	9	9	10	10	10	11	11	12	12
	6.5	5	6	6	7	7	8	8	9	9	9	10	10	10	11	11	12	12	13
	7.0	6	6	6	7	8	8	9	9	9	10	10	10	11	11	12	12	13	13
	7.4	6	7	7	8	8	8	9	9	10	10	11	11	12	12	12	12	13	13
	7.9	7	7	7	8	8	9	9	10	10	11	11	11	12	12	12	13	13	14
	8.4	7	8	8	8	9	9	10	10	11	11	11	11	12	12	13	13	14	14
	8.9	7	8	8	9	9	10	10	11	11	11	12	12	13	13	13	14	14	15
	9.4	8	8	8	9	10	10	11	11	11	12	12	13	13	13	14	14	14	15
	9.9	8	9	9	10	10	10	11	11	12	12	13	13	13	14	14	14	15	15
	10.4	9	9	9	10	10	11	11	12	12	13	13	14	14	14	14	15	15	16
	10.9	9	10	10	10	11	11	12	12	13	13	13	13	14	14	15	15	16	16
	11.3	9	10	10	11	11	12	12	13	13	13	14	14	15	15	15	16	16	17
	11.8	10	10	10	11	12	12	13	13	13	14	14	15	15	15	16	16	16	17
	12.3	10	11	11	12	12	12	13	13	14	14	15	15	16	16	16	16	17	17
	12.8	11	11	11	12	12	13	13	14	14	15	15	16	16	16	16	17	17	18
	13.3	11	12	12	12	13	13	14	14	15	15	15	16	16	16	17	17	18	18
	13.8	11	12	12	13	13	14	14	15	15	15	16	16	17	17	17	18	18	19
	14.3	12	12	12	13	14	14	15	15	15	16	16	17	17	17	18	18	18	19
	14.8	12	13	13	14	14	14	15	15	16	16	17	17	18	18	18	18	19	19
	15.2	13	13	13	14	14	15	15	16	16	17	17	18	18	18	18	19	19	20
	15.7	13	14	14	14	15	15	16	16	17	17	17	18	18	18	19	19	20	20
	16.2	13	14	14	15	15	16	16	17	17	17	18	18	19	19	19	20	20	21
	16.7	14	14	14	15	16	16	17	17	18	18	19	19	20	20	20	20	20	21
	17.2	14	15	15	16	16	16	17	17	18	18	19	19	20	20	20	20	21	21
	17.7	15	15	15	16	16	17	17	18	18	19	19	20	20	20	20	21	21	22
	18.2	15	15	15	16	17	17	18	18	19	19	19	20	20	20	21	21	22	22
18.7	15	16	16	17	17	18	18	19	19	19	20	20	20	21	21	22	22	23	
19.1	16	16	16	17	18	18	19	19	19	20	20	21	21	21	22	22	22	23	
19.6	16	17	17	18	18	18	19	19	20	20	21	21	22	22	22	22	23	23	
20.1	17	17	17	18	18	19	19	20	20	21	21	22	22	22	22	23	23	24	
20.6	17	17	17	18	19	19	20	20	21	21	21	22	22	22	23	23	24	24	
21.1	17	18	18	19	19	20	20	21	21	21	22	22	23	23	23	24	24	25	
21.6	18	18	18	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	
22.1	18	19	19	20	20	20	21	21	22	22	23	23	24	24	24	24	25	25	
22.6	19	19	19	20	20	21	21	22	22	23	23	24	24	24	24	25	25	26	
23.0	19	19	19	20	21	21	22	22	23	23	23	24	24	24	25	25	26	26	
23.5	19	20	20	21	21	22	22	23	23	23	24	24	25	25	25	26	26	27	
24.0	20	20	20	21	22	22	23	23	23	24	24	25	25	26	26	26	27	27	
24.5	20	21	21	22	22	23	23	24	24	24	25	25	26	26	26	27	27	27	
25.0	21	21	21	22	22	23	23	24	24	25	25	26	26	26	27	27	27	28	

Multivariate model - Zinc

Worst-case effluent discharge and Q20 river flow

Zinc

Discharge rate 0.0066 m³/s Worst case effluent flow rate
 River flow rate 0.0025 m³/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
 9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L

Effluent water max 40 µg/L

Receiving min 5 µg/L

Receiving max 25 µg/L

30m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	6	6	6	6	6	7	7	7	7	8	8	8	8	8
	5.5	5	5	5	6	6	6	6	6	7	7	7	7	8	8	8	8	8	9
	6.0	6	6	6	6	6	7	7	7	7	8	8	8	8	8	8	9	9	9
	6.5	6	6	6	7	7	7	7	7	8	8	8	8	8	8	9	9	9	10
	7.0	6	7	7	7	7	8	8	8	8	8	8	9	9	9	9	10	10	10
	7.4	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10	10	10	10
	7.9	7	8	8	8	8	8	8	9	9	9	9	10	10	10	10	10	11	11
	8.4	8	8	8	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11
	8.9	8	8	8	8	9	9	9	10	10	10	10	10	11	11	11	11	12	12
	9.4	9	9	9	9	10	10	10	10	10	10	11	11	11	11	12	12	12	12
	9.9	9	9	9	10	10	10	10	10	11	11	11	11	12	12	12	12	12	13
	10.4	10	10	10	10	10	11	11	11	11	11	12	12	12	12	12	13	13	13
	10.9	10	10	10	11	11	11	11	11	12	12	12	12	12	13	13	13	13	13
	11.3	10	11	11	11	11	12	12	12	12	12	12	13	13	13	13	13	14	14
	11.8	11	11	11	12	12	12	12	12	12	13	13	13	13	13	14	14	14	14
	12.3	11	12	12	12	12	12	12	13	13	13	13	14	14	14	14	14	15	15
	12.8	12	12	12	12	13	13	13	13	13	14	14	14	14	14	15	15	15	15
	13.3	12	12	12	13	13	13	14	14	14	14	14	14	15	15	15	15	15	16
	13.8	13	13	13	13	14	14	14	14	14	14	15	15	15	15	15	16	16	16
	14.3	13	13	13	14	14	14	14	14	15	15	15	15	15	16	16	16	16	17
	14.8	14	14	14	14	14	15	15	15	15	15	15	16	16	16	16	17	17	17
	15.2	14	14	14	15	15	15	15	15	15	16	16	16	16	17	17	17	17	17
	15.7	14	15	15	15	15	16	16	16	16	16	16	17	17	17	17	17	18	18
	16.2	15	15	15	16	16	16	16	16	16	17	17	17	17	17	18	18	18	18
	16.7	15	16	16	16	16	16	17	17	17	17	17	17	18	18	18	18	19	19
	17.2	16	16	16	16	17	17	17	17	17	17	18	18	18	18	19	19	19	19
	17.7	16	16	16	17	17	17	17	18	18	18	18	18	19	19	19	19	19	20
	18.2	17	17	17	17	17	18	18	18	18	18	19	19	19	19	19	20	20	20
	18.7	17	17	17	18	18	18	18	18	19	19	19	19	19	20	20	20	20	21
	19.1	18	18	18	18	18	19	19	19	19	19	19	20	20	20	20	21	21	21
	19.6	18	18	18	19	19	19	19	19	19	20	20	20	20	21	21	21	21	21
	20.1	18	19	19	19	19	19	20	20	20	20	20	21	21	21	21	21	22	22
	20.6	19	19	19	19	20	20	20	20	20	21	21	21	21	21	22	22	22	22
	21.1	19	19	19	20	20	20	20	21	21	21	21	21	21	22	22	22	23	23
	21.6	20	20	20	20	21	21	21	21	21	21	22	22	22	22	23	23	23	23
	22.1	20	20	20	21	21	21	21	21	22	22	22	22	23	23	23	23	23	24
	22.6	21	21	21	21	21	22	22	22	22	22	23	23	23	23	23	24	24	24
	23.0	21	21	21	22	22	22	22	23	23	23	23	23	23	24	24	24	24	25
	23.5	21	22	22	22	22	23	23	23	23	23	23	24	24	24	24	25	25	25
	24.0	22	22	22	23	23	23	23	23	24	24	24	24	24	25	25	25	25	25
	24.5	22	23	23	23	23	23	24	24	24	24	24	25	25	25	25	25	26	26
	25.0	23	23	23	23	24	24	24	24	24	25	25	25	25	25	26	26	26	26

Worst-case effluent discharge and Q20 river flow

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

40m

[illegible]

Multivariate model - Zinc

Average effluent discharge and Q20 river flow

Zinc

Discharge rate 0.00525 m3/s Average effluent flow rate
River flow rate 0.0025 m3/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
Effluent water max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L

Discharge point

		Effluent Zinc (µg/L)																	
		0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	2	4	4	7	9	11	12	14	16	17	19	20	22	24	25	27	29	29
	5.5	2	4	4	7	9	11	12	14	16	17	19	21	22	24	26	27	29	29
	6.0	3	4	4	8	9	11	13	14	16	17	19	21	22	24	26	27	29	29
	6.5	3	4	4	8	9	11	13	14	16	18	19	21	23	24	26	28	29	29
	7.0	3	5	5	8	10	11	13	14	16	18	19	21	23	24	26	28	29	29
	7.4	3	5	5	8	10	11	13	15	16	18	20	21	23	25	26	28	29	29
	7.9	3	5	5	8	10	11	13	15	16	18	20	21	23	25	26	28	30	30
	8.4	3	5	5	8	10	12	13	15	17	18	20	22	23	25	27	28	30	30
	8.9	4	5	5	9	10	12	13	15	17	18	20	22	23	25	27	28	30	30
	9.4	4	5	5	9	10	12	14	15	17	19	20	22	24	25	27	28	30	30
	9.9	4	6	6	9	10	12	14	15	17	19	20	22	24	25	27	29	30	30
	10.4	4	6	6	9	11	12	14	16	17	19	21	22	24	25	27	29	30	30
	10.9	4	6	6	9	11	12	14	16	17	19	21	22	24	26	27	29	31	31
	11.3	4	6	6	9	11	13	14	16	18	19	21	22	24	26	27	29	31	31
	11.8	4	6	6	9	11	13	14	16	18	19	21	23	24	26	28	29	31	31
	12.3	5	6	6	10	11	13	15	16	18	20	21	23	24	26	28	29	31	31
	12.8	5	6	6	10	11	13	15	16	18	20	21	23	25	26	28	30	31	31
	13.3	5	7	7	10	12	13	15	17	18	20	21	23	25	26	28	30	31	31
	13.8	5	7	7	10	12	13	15	17	18	20	22	23	25	27	28	30	32	32
	14.3	5	7	7	10	12	14	15	17	18	20	22	23	25	27	28	30	32	32
	14.8	5	7	7	10	12	14	15	17	19	20	22	24	25	27	29	30	32	32
	15.2	6	7	7	11	12	14	16	17	19	20	22	24	25	27	29	30	32	32
	15.7	6	7	7	11	12	14	16	17	19	21	22	24	26	27	29	31	32	32
	16.2	6	8	8	11	13	14	16	17	19	21	22	24	26	27	29	31	32	32
	16.7	6	8	8	11	13	14	16	18	19	21	23	24	26	28	29	31	32	32
	17.2	6	8	8	11	13	14	16	18	19	21	23	24	26	28	29	31	33	33
	17.7	6	8	8	11	13	15	16	18	20	21	23	25	26	28	29	31	33	33
	18.2	7	8	8	11	13	15	16	18	20	21	23	25	26	28	30	31	33	33
	18.7	7	8	8	12	13	15	17	18	20	22	23	25	27	28	30	31	33	33
	19.1	7	9	9	12	13	15	17	18	20	22	23	25	27	28	30	32	33	33
	19.6	7	9	9	12	14	15	17	19	20	22	24	25	27	28	30	32	33	33
	20.1	7	9	9	12	14	15	17	19	20	22	24	25	27	29	30	32	34	34
20.6	7	9	9	12	14	16	17	19	21	22	24	25	27	29	30	32	34	34	
21.1	7	9	9	12	14	16	17	19	21	22	24	26	27	29	31	32	34	34	
21.6	8	9	9	13	14	16	18	19	21	23	24	26	27	29	31	32	34	34	
22.1	8	9	9	13	14	16	18	19	21	23	24	26	28	29	31	33	34	34	
22.6	8	10	10	13	15	16	18	20	21	23	24	26	28	29	31	33	34	34	
23.0	8	10	10	13	15	16	18	20	21	23	25	26	28	30	31	33	35	35	
23.5	8	10	10	13	15	17	18	20	21	23	25	26	28	30	31	33	35	35	
24.0	8	10	10	13	15	17	18	20	22	23	25	27	28	30	32	33	35	35	
24.5	9	10	10	14	15	17	18	20	22	23	25	27	28	30	32	33	35	35	
25.0	9	10	10	14	15	17	19	20	22	24	25	27	29	30	32	34	35	35	

Multivariate model - Zinc

Average effluent discharge and Q20 river flow

Zinc
Discharge rate 0.00525 m3/s Average effluent flow rate
River flow rate 0.0025 m3/s Q20

Key
9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
Effluent water max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L
10m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	4	4	6	7	8	9	9	10	11	12	13	14	14	15	16	17	17
	5.5	4	5	5	6	7	8	9	10	11	11	12	13	14	15	16	16	17	17
	6.0	4	5	5	7	8	8	9	10	11	12	13	13	14	15	16	17	18	18
	6.5	5	5	5	7	8	9	10	10	11	12	13	14	15	15	16	17	18	18
	7.0	5	6	6	7	8	9	10	11	12	12	13	14	15	16	16	17	18	18
	7.4	5	6	6	8	9	9	10	11	12	13	14	14	15	16	17	18	18	18
	7.9	6	6	6	8	9	10	11	11	12	13	14	15	15	16	17	18	19	19
	8.4	6	7	7	8	9	10	11	12	13	13	14	15	16	17	17	18	19	19
	8.9	6	7	7	9	10	10	11	12	13	14	15	16	17	18	19	19	20	20
	9.4	7	7	7	9	10	11	12	12	13	14	15	16	16	17	18	19	20	20
	9.9	7	8	8	9	10	11	12	13	13	14	15	16	17	18	18	19	20	20
	10.4	7	8	8	10	10	11	12	13	14	15	15	16	17	18	19	20	20	20
	10.9	8	8	8	10	11	12	12	13	14	15	16	17	17	18	19	20	21	21
	11.3	8	9	9	10	11	12	13	14	14	15	16	17	18	19	19	20	21	21
	11.8	8	9	9	11	11	12	13	14	15	16	16	17	18	19	20	21	21	21
	12.3	8	9	9	11	12	13	13	14	15	16	17	18	18	19	20	21	22	22
	12.8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21	22	22
	13.3	9	10	10	12	12	13	14	15	16	17	17	18	19	20	21	22	23	23
	13.8	9	10	10	12	13	14	14	15	16	17	18	19	19	20	21	22	23	23
	14.3	10	11	11	12	13	14	15	16	16	17	18	19	20	21	21	22	23	23
	14.8	10	11	11	13	13	14	15	16	17	18	18	19	20	21	22	22	23	23
	15.2	10	11	11	13	14	15	15	16	17	18	19	20	20	21	22	23	24	24
	15.7	11	12	12	13	14	15	16	17	17	18	19	20	21	21	22	23	24	24
	16.2	11	12	12	14	14	15	16	17	18	18	19	20	21	22	23	23	24	24
	16.7	11	12	12	14	15	16	16	17	18	19	20	20	21	22	23	24	25	25
17.2	12	13	13	14	15	16	17	17	18	19	20	21	22	22	23	24	25	25	
17.7	12	13	13	15	15	16	17	18	19	19	20	21	22	23	24	24	25	25	
18.2	12	13	13	15	16	16	17	18	19	20	21	21	22	23	24	25	26	26	
18.7	13	14	14	15	16	17	18	18	19	20	21	22	23	23	24	25	26	26	
19.1	13	14	14	15	16	17	18	19	20	20	21	22	23	24	25	25	26	26	
19.6	13	14	14	16	17	17	18	19	20	21	22	22	23	24	25	26	27	27	
20.1	14	14	14	16	17	18	19	19	20	21	22	23	24	24	25	26	27	27	
20.6	14	15	15	16	17	18	19	20	21	21	22	23	24	25	26	26	27	27	
21.1	14	15	15	17	18	18	19	20	21	22	23	23	24	25	26	27	28	28	
21.6	15	15	15	17	18	19	20	20	21	22	23	24	25	25	26	27	28	28	
22.1	15	16	16	17	18	19	20	21	22	22	23	24	25	26	26	27	28	28	
22.6	15	16	16	18	19	19	20	21	22	23	24	24	25	26	27	28	29	29	
23.0	16	16	16	18	19	20	21	21	22	23	24	25	25	26	27	28	29	29	
23.5	16	17	17	18	19	20	21	22	23	23	24	25	26	27	27	28	29	29	
24.0	16	17	17	19	20	20	21	22	23	24	24	25	26	27	28	29	30	30	
24.5	17	17	17	19	20	21	22	22	23	24	25	26	26	27	28	29	30	30	
25.0	17	18	18	19	20	21	22	23	23	24	25	26	27	28	28	29	30	30	

Multivariate model - Zinc

Average effluent discharge and Q20 river flow

Zinc
Discharge rate 0.00525 m3/s Average effluent flow rate
River flow rate 0.0025 m3/s Q20

Key
9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L
Effluent water max 40 µg/L
Receiving min 5 µg/L
Receiving max 25 µg/L
20m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	4	5	5	6	6	6	7	7	8	8	8	8	9	9	10	10	11	11
	5.5	5	5	5	6	6	7	7	8	8	8	8	9	9	10	10	11	11	11
	6.0	5	6	6	6	7	7	8	8	8	8	9	9	10	10	10	11	11	12
	6.5	6	6	6	7	7	8	8	8	9	9	9	10	10	10	11	11	12	12
	7.0	6	6	6	7	8	8	8	8	9	9	10	10	10	11	11	12	12	13
	7.4	6	7	7	8	8	8	9	9	10	10	10	10	11	11	12	12	13	13
	7.9	7	7	7	8	8	9	9	10	10	10	10	11	11	12	12	13	13	13
	8.4	7	8	8	8	9	9	10	10	10	11	11	11	12	12	13	13	13	14
	8.9	8	8	8	9	9	10	10	10	11	11	12	12	13	13	13	14	14	14
	9.4	8	8	8	9	10	10	10	11	11	12	12	12	13	13	13	14	14	15
	9.9	8	9	9	10	10	10	11	11	12	12	12	13	13	13	14	14	15	15
	10.4	9	9	9	10	10	11	11	12	12	12	12	13	13	14	14	15	15	15
	10.9	9	10	10	10	11	11	12	12	12	12	13	13	14	14	15	15	15	16
	11.3	10	10	10	11	11	12	12	12	12	13	13	14	14	15	15	15	16	16
	11.8	10	10	10	11	12	12	12	13	13	14	14	14	15	15	15	16	16	17
	12.3	10	11	11	12	12	12	13	13	14	14	14	15	15	15	16	16	17	17
	12.8	11	11	11	12	12	13	13	14	14	15	15	15	15	16	16	17	17	17
	13.3	11	12	12	12	13	13	14	14	15	15	15	15	16	16	17	17	17	18
	13.8	12	12	12	13	13	14	14	14	15	15	15	16	16	17	17	17	18	18
	14.3	12	12	12	13	14	14	14	15	15	16	16	16	17	17	17	18	18	19
	14.8	12	13	13	14	14	14	15	15	16	16	16	17	17	17	18	18	19	19
	15.2	13	13	13	14	14	15	15	16	16	17	17	17	17	18	18	19	19	19
	15.7	13	14	14	14	15	15	16	16	17	17	17	17	18	18	19	19	19	20
	16.2	14	14	14	15	15	16	16	17	17	17	17	18	18	19	19	19	20	20
	16.7	14	14	14	15	16	16	17	17	17	18	18	18	19	19	19	20	20	21
	17.2	14	15	15	16	16	17	17	17	18	18	18	19	19	19	20	20	21	21
	17.7	15	15	15	16	17	17	17	18	18	18	19	19	19	20	20	21	21	21
	18.2	15	16	16	17	17	17	18	18	19	19	19	19	20	20	21	21	21	22
	18.7	16	16	16	17	17	18	18	19	19	19	19	20	20	21	21	21	22	22
	19.1	16	16	16	17	18	18	19	19	19	20	20	21	21	21	21	22	22	23
19.6	16	17	17	18	18	19	19	19	20	20	21	21	21	21	22	22	23	23	
20.1	17	17	17	18	19	19	19	20	20	21	21	21	21	22	22	23	23	23	
20.6	17	18	18	19	19	19	20	20	21	21	21	21	22	22	23	23	23	24	
21.1	18	18	18	19	19	20	20	21	21	21	22	22	22	23	23	23	24	24	
21.6	18	19	19	19	20	20	21	21	21	22	22	22	23	23	23	24	24	25	
22.1	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25	
22.6	19	19	19	20	21	21	21	22	22	23	23	23	23	24	24	25	25	26	
23.0	19	20	20	21	21	21	22	22	23	23	23	23	24	24	25	25	26	26	
23.5	20	20	20	21	21	22	22	23	23	23	23	24	24	25	25	25	26	26	
24.0	20	21	21	21	22	22	23	23	23	24	24	24	25	25	25	26	26	27	
24.5	21	21	21	22	22	23	23	23	24	24	25	25	25	25	26	26	27	27	
25.0	21	21	21	22	23	23	23	24	24	25	25	25	25	26	26	27	27	28	

Multivariate model - Zinc

Average effluent discharge and Q20 river flow

Zinc

Discharge rate 0.00525 m3/s Average effluent flow rate
River flow rate 0.0025 m3/s Q20

Key

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)
9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min 1 µg/L

Effluent water max 40 µg/L

Receiving min 5 µg/L

Receiving max 25 µg/L

30m

		Effluent Zinc (µg/L)																	
		0.0	1.0	3.4	5.9	8.3	10.8	13.2	15.6	18.1	20.5	22.9	25.4	27.8	30.3	32.7	35.1	37.6	40.0
Receiving Water Zinc (µg/L)	5.0	5	5	5	5	5	6	6	6	6	7	7	7	7	7	7	8	8	8
	5.5	5	5	5	6	6	6	6	6	7	7	7	7	7	8	8	8	8	8
	6.0	6	6	6	6	6	6	7	7	7	7	7	8	8	8	8	8	9	9
	6.5	6	6	6	7	7	7	7	7	7	8	8	8	8	8	9	9	9	9
	7.0	6	7	7	7	7	7	7	8	8	8	8	9	9	9	9	9	10	10
	7.4	7	7	7	8	8	8	8	8	8	9	9	9	9	9	10	10	10	10
	7.9	7	8	8	8	8	8	8	9	9	9	9	9	9	10	10	10	10	11
	8.4	8	8	8	8	9	9	9	9	9	9	10	10	10	10	10	11	11	11
	8.9	8	8	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11	12
	9.4	9	9	9	9	10	10	10	10	10	10	11	11	11	11	11	12	12	12
	9.9	9	9	9	10	10	10	10	10	11	11	11	11	11	11	12	12	12	12
	10.4	10	10	10	10	10	11	11	11	11	11	11	12	12	12	12	12	13	13
	10.9	10	10	10	11	11	11	11	11	11	12	12	12	12	12	13	13	13	13
	11.3	10	11	11	11	11	11	11	12	12	12	12	13	13	13	13	13	14	14
	11.8	11	11	11	12	12	12	12	12	12	13	13	13	13	13	14	14	14	14
	12.3	11	12	12	12	12	12	12	13	13	13	13	13	13	14	14	14	14	15
	12.8	12	12	12	12	13	13	13	13	13	13	14	14	14	14	14	15	15	15
	13.3	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15	15	15	16
	13.8	13	13	13	13	14	14	14	14	14	14	15	15	15	15	15	16	16	16
	14.3	13	13	13	14	14	14	14	14	15	15	15	15	15	15	16	16	16	16
	14.8	14	14	14	14	14	15	15	15	15	15	15	16	16	16	16	16	17	17
	15.2	14	14	14	15	15	15	15	15	15	16	16	16	16	16	17	17	17	17
	15.7	14	15	15	15	15	16	16	16	16	16	16	16	17	17	17	17	18	18
	16.2	15	15	15	16	16	16	16	16	16	17	17	17	17	17	17	18	18	18
	16.7	15	16	16	16	16	16	16	17	17	17	17	17	17	18	18	18	18	19
	17.2	16	16	16	16	17	17	17	17	17	17	18	18	18	18	18	19	19	19
17.7	16	16	16	17	17	17	17	18	18	18	18	18	18	19	19	19	19	20	
18.2	17	17	17	17	18	18	18	18	18	18	19	19	19	19	19	20	20	20	
18.7	17	17	17	18	18	18	18	18	18	19	19	19	19	19	20	20	20	20	
19.1	18	18	18	18	18	19	19	19	19	19	19	19	20	20	20	20	21	21	
19.6	18	18	18	19	19	19	19	19	19	20	20	20	20	20	21	21	21	21	
20.1	19	19	19	19	19	20	20	20	20	20	20	20	21	21	21	21	22	22	
20.6	19	19	19	20	20	20	20	20	20	20	21	21	21	21	21	22	22	22	
21.1	19	20	20	20	20	20	20	21	21	21	21	21	21	22	22	22	22	23	
21.6	20	20	20	20	21	21	21	21	21	21	22	22	22	22	22	23	23	23	
22.1	20	20	20	21	21	21	22	22	22	22	22	22	22	23	23	23	23	24	
22.6	21	21	21	21	22	22	22	22	22	22	23	23	23	23	23	24	24	24	
23.0	21	21	21	22	22	22	22	22	23	23	23	23	23	23	24	24	24	24	
23.5	22	22	22	22	22	23	23	23	23	23	23	23	24	24	24	24	25	25	
24.0	22	22	22	23	23	23	23	23	24	24	24	24	24	24	25	25	25	25	
24.5	23	23	23	23	23	24	24	24	24	24	24	24	25	25	25	25	26	26	
25.0	23	23	23	24	24	24	24	24	24	25	25	25	25	25	25	26	26	26	

Average effluent discharge and Q20 river flow

9.99 Concentrations below the AEPR freshwater limit (5 µg/L)

9.99 Concentrations above the AEPR freshwater limit (5 µg/L)

Effluent water min	1 µg/L
Effluent water max	40 µg/L
Receiving min	5 µg/L
Receiving max	25 µg/L
40m	

[illegible]

Annexure D Groundwater Monitoring Program

Groundwater Monitoring Program

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-SWD-SW000-GE-RPT-040404
Revision date	30 August 2023
Revision	2.01

Document approval

Rev	Date	Prepared by	Reviewed by	Approved by	Remarks
2.01	30/08/2023				Revised following completion of baseline groundwater assessment For internal review
Signature:					



Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Design Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Design Director and/or client before being distributed / implemented.

Revision Details

Revision	Details
A	Initial draft issue
B	Second draft issue
C	Third draft issue
D	Nil
0	Revised in response to stakeholder consultation
1	Revised in response to ER comments
2.01	Revised following completion of baseline groundwater assessment For internal review



Table of contents

Definitions.....	
1 Introduction	1
1.1 Project overview	1
1.2 SBT Works scope	1
1.3 Purpose and objectives of this GWMP	5
1.4 Scope of groundwater monitoring program	6
1.4.1 Technical requirements	6
1.4.2 Conditions of Approval, REMMs and CEMF	6
1.5 Stakeholder consultation and approvals.....	9
1.6 Groundwater Regulatory framework and legislation.....	10
1.7 Related documents.....	12
1.8 Limitations	14
2 Physical Setting	15
2.1 Geology	15
2.2 Hydrogeology	16
2.2.1 Aquifers	16
2.2.2 Groundwater recharge and discharge.....	17
2.3 Groundwater levels and flow	17
2.4 Groundwater quality	23
2.5 Groundwater users	25
2.6 Groundwater dependent ecosystems.....	26
3 Environmental Impacts	27
3.1 Construction groundwater inflow and drawdown assessment.....	27
3.1.1 St Marys Station	27
3.1.2 Claremont Meadows Facility	27
3.1.3 Orchard Hills Station	28
3.1.4 Bringelly Services Facility.....	28
3.1.5 Aerotropolis Core Station	28
3.2 Environmental impacts	28
3.2.1 Registered groundwater users	29
3.2.2 Mobilisation of groundwater contamination	30
3.2.3 Groundwater dependent ecosystems.....	32
4 Environmental control measures	34
4.1 Inflow control	34
4.2 Groundwater contamination	35
4.3 Water Treatment.....	35
4.4 GDE Mitigation Measures.....	36



5	Groundwater monitoring – baseline conditions.....	38
5.1	Pre-award Data	38
5.2	Baseline groundwater assessment.....	38
5.3	GDE monitoring	51
6	Construction monitoring.....	54
6.1	Construction Timing.....	54
6.2	Groundwater level monitoring.....	55
6.2.1	Groundwater level - performance criteria	56
6.3	Groundwater quality monitoring.....	60
6.3.1	St Marys – Mitigation system monitoring.....	60
6.3.2	Alignment wide groundwater quality monitoring.....	61
6.3.3	Groundwater quality performance criteria	69
6.4	GDE and Salinity monitoring	74
6.4.1	GDE monitoring performance criteria	76
6.5	Tunnel inflows and water treatment plant monitoring	77
7	Monitoring methodology	79
7.1	Overview.....	79
7.2	Continuous Groundwater Monitoring.....	79
7.2.1	Vibrating Wire Piezometers.....	79
7.2.2	Groundwater monitoring bores.....	80
7.3	Manual groundwater level measurements.....	80
7.4	Groundwater Sampling.....	81
7.4.1	Sampling Methodology.....	81
7.4.2	Field Measurements.....	82
7.5	Effluent Water Quality – Water Treatment Plant	82
7.5.1	In-Line Monitoring.....	82
7.5.2	Sampling Methodology.....	82
7.5.3	Field Measurements.....	82
7.6	Field Notes	82
7.7	Field Quality Assurance / Quality Control	83
7.7.1	Sampling Records	83
7.7.2	Decontamination Procedures	83
7.7.3	Field Method Blanks.....	83
7.7.4	Intra-Laboratory Duplicates	83
7.7.5	Inter-laboratory Duplicates (Triplicates)	83
7.7.6	Trip Blanks	84
7.8	Laboratory Selection and Water Quality Testing Parameters.....	84
7.8.1	Laboratory Selection	84



7.8.2	Laboratory Testing Parameters	84
7.8.3	Sample Filtration and Preservative Requirements	84
7.9	Laboratory Quality Assurance / Quality Control	85
7.9.1	Laboratory Data Quality Indicators	85
7.10	Suitability of Sampling Results	85
7.11	Suitably Qualified Staff	87
8	Compliance management.....	88
8.1	Roles and responsibilities and training	88
8.2	Groundwater monitoring	88
8.3	Data analysis and response	88
8.4	Auditing.....	89
8.5	Reporting and records	89
8.5.1	Reporting.....	89
8.5.2	Records	90
9	Review and Improvement.....	91
9.1	Review	91
9.2	Continual improvement.....	91
9.3	Updates to GWMP.....	91
10	References	92

Table of tables

Table 1-1:	SBT Worksite overview	2
Table 1-2:	Conditions requirement relevant to groundwater	6
Table 1-3:	Key legislative and policy documents	11
Table 2-1:	General groundwater quality summary	24
Table 2-2:	Registered groundwater wells with extractive use	25
Table 3-1:	Key potential construction stage groundwater risks.....	29
Table 3-2:	Potential sources of groundwater contamination and identified data gaps.....	30
Table 3-3:	Key groundwater potential impacts	32
Table 3-4:	Terrestrial GDE impact assessment summary.....	33
Table 4-1:	Estimated long-term inflows at structure locations.....	34
Table 4-2:	Minimum Water Treatment Plant Processes.....	35
Table 4-3:	Groundwater assessment, monitoring and mitigation measures – terrestrial GDEs	36
Table 4-4:	Proposed contingency mitigation and offsets for terrestrial GDEs.....	37
Table 5-1:	Construction details of groundwater monitoring bores able to be sampled for baseline assessment	40
Table 5-2:	VWPs installed to inform baseline conditions and monitor levels during construction	45
Table 5-3:	Baseline groundwater EC and levels in GDE monitoring wells.....	52
Table 6-1:	Construction phase timing.....	54
Table 6-2:	Cross passage construction timing	54
Table 6-3:	Traffic light trigger level system.....	56



Table 6-4: Groundwater trigger levels and limits	57
Table 6-5: Mitigation groundwater monitoring – St Marys	60
Table 6-6: Construction Monitoring – Analytical Suites	61
Table 6-7: Construction water quality monitoring Wells – frequency, water quality analysis and level/EC monitoring	62
Table 6-8: Groundwater quality action triggers	71
Table 6-9: Groundwater bores to be monitored for EC and level during construction	75
Table 6-10: Preliminary EC SSTVs for continuous EC monitoring of GDEs	76
Table 6-11: Preliminary Level SSTVs for continuous level monitoring of GDEs	76
Table 6-12: WTP Groundwater Inflow and Process Water Summary	77
Table 7-1: Sample Filtration and Preservative Requirements	84
Table 7-2: Sample Filtration and Preservative Requirements	85
Table 7-3: Sampling Data Quality Indicators	86
Table 8-1: Groundwater monitoring reporting schedule	89

Table of figures

Figure 1-1: Overview of SBT works	4
Figure 2-1: Groundwater level contours and flow direction – Alignment Overview	18
Figure 2-2: Groundwater level contours and flow direction – St Marys Station and Claremont Meadows	19
Figure 2-3: Groundwater level contours and flow direction – Claremont Meadows and Orchard Hills Station	20
Figure 2-4: Groundwater level contours and flow direction – Airport Terminal and Portal Dive Structure	21
Figure 2-5: Groundwater level contours and flow direction – Bringelly Service Facility and Aerotropolis Core	22
Figure 5-1: Detailed Site Investigation and Baseline Assessment Works – Northern Groundwater Bore and VWP Locations	49
Figure 5-2: Detailed Site Investigation and Baseline Assessment Works – Southern Groundwater Bore and VWP Locations	50
Figure 6-1: Construction groundwater monitoring program – St Marys Station	65
Figure 6-2: Construction groundwater monitoring program – South Creek to Orchard Hills Station	66
Figure 6-3: Construction groundwater monitoring program – WSI and Bringelly Services Facility	67
Figure 6-4: Construction groundwater monitoring program – Aerotropolis Core Station	68

Annexures

Annexure A: Monitoring Network Summary and Figures
Annexure B: Geological Long Sections
Annexure C: Groundwater Dependent Ecosystem Summary and Figures
Annexure D: Groundwater Quality Analytical Data
Annexure E: EPL# 21672
Annexure F: Groundwater Quality Assessment
Annexure G: Environmental Representative Endorsement



Definitions

Term	Definition
AIP	Aquifer Interference Policy
ANZG (2018)	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)
ASS	Acid Sulfate Soil
CEMP	Construction Environmental Management Plan
CPBG	CPB Contractors Ghella Joint Venture
CoA	Conditions of Approval
COC	Chain of Custody
CSSI	The Critical State Infrastructure, as described in Schedule 1, the carrying out of which is approved under the terms of the SSI 10051 approval
DPE	NSW Department of Planning and Environment
DQO	Data Quality Objective
EC	Electrical Conductivity
EIS	Sydney Metro Western Sydney Airport – Environmental Impact Statement
EMM	Environmental Management Measures
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)
EPL	Environment Protection Licence
EWMS	Environmental Work Method Statements
GDEs	Groundwater Dependent Ecosystems
GIR	Geological Interpretative Report
GWMP	Groundwater Monitoring Program
GWQ	Groundwater Quality
HIR	Hydrogeological Interpretive Report
LOR	Limit of Reporting
m AHD	Elevation in metres with respect to the Australian Height Datum
mbgl	Metres below ground level
mbtoc	Metres below top of casing
m/day	Metres per day
m/s	Metres per second



Term	Definition
NATA	National Association of Testing Authorities
NRAR	Natural Resources Access Regulator
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997
RPD	Relative Percent Difference
SMART	Specific, Measurable, Achievable, Realistic, and Time-based goals
SSTOM	Stations, Systems, Trains, Operations and Maintenance
SSTV	Site-Specific Trigger Value
TBM	Tunnel boring machine
TfNSW	Transport for NSW
TDS	Total Dissolved Solids
µS/cm	Micro-Siemens per centimetre
VOC	Volatile Organic Compounds
WSI	Western Sydney International
WTP	Water Treatment Plant



1 Introduction

1.1 Project overview

This NSW (Off-airport) Groundwater Monitoring Program (GWMP) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project) and is an Appendix of the Soil and Water Management Sub-Plan (SWMP). This GWMP describes how the CPB Contractors Ghella Joint Venture (CPBG) will monitor the groundwater impacts of the SBT Works in NSW.

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a new 23km metro rail line from the existing Sydney Trains suburban T1 Western Line (at St Marys) in the north and the Aerotropolis (at Bringelly) in the south. The alignment includes tunnels and civil structures, including a viaduct, bridges, and surface and open-cut troughs between the two tunnel sections (Figure 1).

The Project will be delivered through several works packages including the SBT Works, which includes the design and construction of:

- Two sections of twin tunnels with a combined length of approximately 9.8km, plus associated portal structures, one from Orchard Hills to St Marys and the other under Western Sydney International (WSI) airport to the new Aerotropolis Station
- Excavations at either end to enable trains to turn back, and stub tunnels to enable future extensions
- Station box excavations with temporary ground support for four stations at St Marys, Orchard Hills, Airport Terminal and Aerotropolis
- Excavations for two intermediate services facilities, one in each of the tunnel sections at Claremont and Bringelly.

1.2 SBT Works scope

The construction methodology for the SBT Works entails:

- Utility works including removal, diversion, protection and connection to SBT worksites
- Local area works including provision of site accesses and some road upgrades
- Site establishment works including:
 - Fencing
 - Installation of environmental mitigation measures including erosion and sediment controls, noise barriers and acoustic enclosures
 - Clearing and grubbing of existing vegetation
 - Demolition of existing buildings and structures
 - Site levelling and drainage works
 - Establishment of internal access roads, hardstand areas and onsite parking
 - Erection of demountable buildings including offices and amenities
 - Other ancillary facilities including the erection of sheds, establishment of materials laydown and stockpiling areas and Tunnel Boring Machine (TBM) support works including spoil conveyors.
- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers. Roadheaders will also be used at St Marys and Aerotropolis to complete the stub tunnels
- Construction of mainline tunnels using four TBMs, as follows:



- Two earth pressure balance TBMs will be launched from Orchard Hills and tunnel north to St Marys a distance of approximately 4.3km, including traversing the Claremont Shaft. The TBMs will be retrieved from the St Marys station box.
- Two double shield TBMs will be launched from the Airport Dive and tunnel south, traverse the Airport Terminal station box and shaft, where tunnelling will stop and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at the Airport Terminal Shaft. The TBMs will then recommence tunnelling, including traversing the Bringelly Shaft, and will be retrieved from the Aerotropolis station box (5.5km from the Airport Dive, with 2.5km of the southern tunnels located within NSW).
- Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to Orchard Hills and the Airport Dive site and retrieved from St Marys and Aerotropolis, subject to relevant approvals.

The SBT Works do not include any surface works between the northern and southern tunnel sections, which are to be undertaken by another contractor.

Tunnelling, including station box, shaft and dive excavation and associated support activities will occur 24 hours a day, seven days a week. Utility and local area works that cannot be completed during standard daytime hours due to Road Occupancy Licence or utility authority requirements will also be undertaken out of hours.

Completed sections of the SBT Works, including established construction worksites, will be progressively handed over to Sydney Metro to enable follow-on contractors to commence works. The exception is the temporary precast facility, where the site will be decommissioned following the completion of segment manufacture and storage, and hydroseeded.

An overview of works at each SBT worksite is provided in Table 1-1.

Table 1-1: SBT Worksite overview

Jurisdiction	Worksite	Indicative scope of works
NSW	St Marys	<ul style="list-style-type: none"> • Demolition of existing industrial premises • Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using road headers • TBM retrieval • Operation of water treatment plant and discharge of water.
NSW	Claremont Meadows	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and services facility shaft excavation using ripper and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (pouring of an invert concrete slab in the tunnel) (subject to Sydney Metro approval) • Operation and discharge of tunnel ventilation system • Operation of water treatment plant and discharge of water
NSW	Orchard Hills	<ul style="list-style-type: none"> • Demolition of existing buildings and removal of septic tanks • Offices, amenities, car parking and access roads • Lansdowne Road temporary diversion and construction of the permanent road bridge • Piling and portal, station box and dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent portal structure • TBM assembly, launch and tunnelling support works



Jurisdiction	Worksite	Indicative scope of works
		<ul style="list-style-type: none"> • Cross passage construction support • Precast segment storage • Operation and discharge of tunnel and acoustic enclosure ventilation system • Operation of water treatment plant and discharge of water
On-Airport	Airport Portal Dive Structure	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support • Precast facility • Materials laydown • Segment storage • General storage
On-Airport	Airport Terminal and TBM shaft	<ul style="list-style-type: none"> • Offices, amenities car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support • Operation of water treatment plant and discharge of water
On-Airport	Primary Spoil Reveal	<ul style="list-style-type: none"> • Access road • TBM spoil conveyor set up • Earthworks in accordance with Sydney Metro Specifications.
NSW	Bringelly	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and services facility shaft using rippers and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval) • Operation and discharge of tunnel ventilation system • Operation of water treatment plant and discharge of water
NSW	Aerotropolis	<ul style="list-style-type: none"> • Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval • Operation and discharge of tunnel ventilation system • Operation of water treatment plant and discharge of water

Note: Worksites in grey are within the boundary of the Western Sydney International (On-Airport) and regulated under the *Commonwealth Airports Act 1996*.





Figure 1-1: Overview of SBT works



1.3 Purpose and objectives of this GWMP

The purpose of the GWMP is to describe how CPBG propose to monitor the extent and nature of potential impacts to the groundwater level and quality during the SBT Works.

The GWMP will be implemented to monitor the effectiveness of mitigation measures applied during the construction phase of the SBT Works. Monitoring of groundwater will be undertaken to identify potential impacts and ensure a comprehensive management regime can be implemented to address those impacts and manage local groundwater quality.

Reflecting the requirements of Condition C13(b), this GWMP supports the SWMP by detailing the groundwater monitoring network, frequency of monitoring, and test parameters.

This GWMP is based on baseline studies developed for the Western Sydney Airport (WSA) Environmental Impact Statement (EIS) (WSP and AECOM 2020), baseline monitoring reports completed by Cardno (2021), the project-wide baseline groundwater assessment (Tetra Tech Major Projects 2023); and additional information sources as listed in Section 2 of the Hydrogeological Interpretative Report (HIR), (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). This document should be regularly updated as the construction monitoring program progresses, and additional data is available.

This GWMP details specific steps that are required to monitor groundwater in accordance with the SSI 10051 Planning Approval and management and mitigation measures outlined in the Soil and Water Sub-Plan. Specifically, the purpose of this GWMP is to:

- Assist CPBG to manage the impacts of the SBT Works to ensure there are no unintended consequences to the pre-existing hydrogeological regime
- Demonstrate mitigation and management measures are achieving the stated objectives
- Identify if adaptive management responses are required to further manage groundwater impacts.

The objectives of the GWMP are to:

- Comply with:
 - State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)
 - Sydney Metro Western Sydney Airport – CSSI Staging Report (Revision 6.0) (Staging Report)
 - Sydney Metro Construction Environmental Management Framework (CEMF)
 - EIS and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
 - Environment Protection Licence (EPL)
 - Contractual requirements, including the SBT Design and Construction Deed and General and Particular Specifications
 - Applicable legislation
- Reduce the potential for drawdown of surrounding groundwater resources
- Prevent the pollution of groundwater through appropriate controls
- Reduce the potential impacts on groundwater dependent ecosystems
- Confirm no adverse impacts on the receiver during construction, or to effectively manage any impacts with the implementation of appropriate mitigation measures.

The objectives will be achieved by:

- Establishing monitoring parameters that enable comparison of the actual construction performance against the predicted performance of mitigation measures
- Identifying thresholds for monitoring parameters that if exceeded will trigger the need for management responses
- Scheduling and assignment of responsibilities of monitoring requirements.



1.4 Scope of groundwater monitoring program

The scope of this GWMP is to describe how CPBG will monitor the extent and nature of potential impacts to groundwater levels and quality during the SBT Works which will allow for implementation of appropriate management measures to address construction impacts.

Operational monitoring measures do not fall within the scope of the construction phase and therefore are not included in this GWMP.

1.4.1 Technical requirements

This GWMP includes the following:

- Groundwater monitoring to be undertaken, including the location and frequency of monitoring and parameters to be monitored
- Detail of water treatment plant monitoring to be undertaken
- Detail regarding analysis and reporting of monitoring data.

1.4.2 Conditions of Approval, REMMs and CEMF

The Conditions of Approval, REMMs and CEMF requirements of relevance to the GWMP are presented in Table 1-2 together with a cross-reference to where the requirement is addressed in this document.

Table 1-2: Conditions requirement relevant to groundwater

Condition	Requirement	Reference
Conditions of Approval		
C14 (a)	details of baseline data available including the period of baseline monitoring;	Section Error! Reference source not found. (Pre-award data) and Section 5.2 (Baseline groundwater assessment)
C14 (b)	details of baseline data to be obtained and when;	Section Error! Reference source not found. (Baseline groundwater assessment)
C14 (c)	details of all monitoring of the project to be undertaken;	Section Error! Reference source not found. (Baseline groundwater assessment) Section 6 (Construction monitoring)
C14 (d)	the parameters of the project to be monitored;	Sections 6 (Construction monitoring) Section 7 (Monitoring methodology)
C14 (e)	the frequency of monitoring to be undertaken;	Sections 6 (Construction monitoring) Section 7 (Monitoring methodology)
C14 (f)	the location of monitoring;	Sections 5 and 6 (Baseline and Construction monitoring)
C14 (g)	the reporting of monitoring results and analysis results against relevant criteria;	Section 6 (Construction monitoring) Section 7 (Monitoring methodology) Section 7 (Compliance management)



Condition	Requirement	Reference
C14 (h)	details of the methods that will be used to analyse the monitoring data;	Section 6 (Construction monitoring) Section 7 (Monitoring methodology) Section 8.3 (Data analysis)
C14 (i)	procedures to identify and implement additional mitigation measures where the results of the monitoring indicated unacceptable project impacts;	Section 6 (Construction monitoring)
C14 (j)	a consideration of SMART principles;	Sections 5 and 6 (Baseline and construction Groundwater monitoring) and Table A1, Annexure G
C14 (k)	any consultation to be undertaken in relation to the monitoring programs; and	Section 1.5 (Stakeholder consultation and approvals)
C14 (l)	any specific requirements as required by Conditions C15 to C16	Table 1-2
C16 (a)	Groundwater monitoring networks at each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;	Sections 5 and 6 (Baseline and construction Groundwater monitoring)
C16 (b)	Detail of the location of all monitoring bores with nested sites to monitor both shallow and deep groundwater levels and quality;	Sections 5 and 6 (Baseline and construction Groundwater monitoring)
C16 (c)	Define the location of saltwater interception monitoring where sentinel groundwater monitoring bores will be installed between the saline sources and that of each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;	Section 2.4 (Groundwater quality) Section 5.3 (GDE monitoring) Section 6 (Construction monitoring)
C16 (d)	Results from existing monitoring bores;	Section 2.3 and 2.4 (Groundwater levels and quality) Section 5 (Baseline monitoring) Annexure D (Water Quality data) and Annexure F (Baseline water quality summary)
C16 (e)	Monitoring and gauging of groundwater inflow to the excavations predicted to intercept groundwater in the documents listed in Condition A1, appropriate trigger action response plan for all predicted groundwater impacts upon each noted neighbouring groundwater	Section 6 (Construction monitoring) Section 7 (Monitoring methodology)
C16 (f)	Trigger levels for groundwater quality, salinity and groundwater drawdown in monitoring bores and / or other groundwater users;	Section 6 (Construction monitoring)
C16 (g)	Daily measurement of the amount of water discharged from the water treatment plants;	Section 7 (Monitoring methodology)
C16 (h)	Water quality testing of the water discharged from treatment plants;	Section 4.3 (Water Treatment)



Condition	Requirement	Reference
		Section 6 (Construction monitoring)
C16 (i)	Management and mitigation measures and criteria, including measures to address impacts	Section 4 (Environmental control measures) Section 6 (Construction monitoring)
C16 (j)	Groundwater inflow to the excavations to enable a full accounting of the groundwater take from the Sydney Basin Central Groundwater Source;	Section 4.1 (Inflow controls) <i>And Groundwater modelling report</i>
C16 (k)	Reporting of groundwater gauging at excavations, groundwater monitoring, groundwater trigger events and action responses; and	Section 6 (Construction monitoring) <i>And Groundwater modelling report</i>
C16 (l)	Methods for providing the data collected to Sydney Water where discharges are directed to their assets	Section 1.5 (Stakeholder engagement) Section 8.5 (Reporting)
E133	Make good provisions for groundwater users must be provided in the event of a material decline in water supply levels, quality or quantity from registered existing bores associated with groundwater changes from either construction and/or ongoing operational dewatering by the CSSI	Section 2.5 (Groundwater Users) Section 3.2 (Environmental Impacts)
REMMs		
GW5	Detailed hydrogeological and geotechnical models for the project would be developed and progressively updated during design and construction. These models would: <ul style="list-style-type: none"> Be informed by the results of groundwater monitoring undertaken before and during construction Identify predicted changes to groundwater levels, including at nearby water supply works and at groundwater dependent ecosystems or other sensitive groundwater receptors. 	Hydrogeological and geotechnical models are detailed in the Project-Wide Groundwater Modelling Report (SMWSASBT-CPG-SWD-SW000-GE-RPT-040402)
GW5	Where changes to groundwater levels are predicted at nearby water supply works, groundwater dependent ecosystems or other sensitive groundwater receivers, an appropriate groundwater monitoring program would be developed and implemented.	The SBT Works are not located in the vicinity of water supply works.
GW5	Where changes to groundwater level are close to the ground surface, dryland salinity monitoring would be implemented to allow for management of any identified impacts.	The SBT Works will not result in changes to groundwater level close to the surface and as such, the requirements of this REMM are not triggered.
GW5	The groundwater monitoring program would aim to confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures. Monitoring at any specific location would be subject to the	Section 1.6 (Groundwater regulatory framework and legislation) Section 6 (Construction monitoring)



Condition	Requirement	Reference
	status of the water supply work and agreement with the landowner.	
GW6	<p>A Groundwater Management Plan would be prepared and implemented. The plan must include the following trigger-action response measures in relation to groundwater levels in areas identified as subject to potential drawdown (at groundwater dependent ecosystems or other sensitive receivers) but outside the construction footprint and Western Sydney International Stage 1 Construction Impact Zone:</p> <ol style="list-style-type: none"> target criteria, set with reference to relevant standards and site specific parameters trigger values and corresponding corrective actions to prevent recurring or long-term exceedance of the target criteria described in (a) corrective actions to compensate for any recurring or long-term exceedance of the target criteria described in (a) <p>Response measures may include:</p> <ul style="list-style-type: none"> Targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown Design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown Supplementing groundwater supply at affected groundwater dependent ecosystems or watercourses Make good provisions for groundwater supply wells impacted by changes in groundwater level or quality. 	<p>Section 6.2.1 (Groundwater level – performance criteria)</p> <p>Sections 6.3.1 and 6.3.3 (Groundwater Quality Performance Criteria)</p> <p>Section 6.4.1 (GDE Monitoring Performance Criteria)</p> <p>Section 8.3 (Data Analysis and Response)</p>
SC9	Targeted groundwater investigations would be undertaken prior to construction to identify high salinity areas at risk from rising groundwater. Where high saline areas (>1000 µS/cm) are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in recharge, transmission and discharge zones would be implemented where possible.	<p>Section 5.2 (Baseline groundwater assessment)</p> <p>Section 6.4 (GDE and salinity monitoring)</p>
CEMF		
7.2 (b) viii	Details of groundwater monitoring if required.	Section 6 (Construction monitoring)

1.5 Stakeholder consultation and approvals

Reflecting the requirements of Conditions A6 and C13(c), this GWMP has been prepared in consultation with DPE Water. A detailed consultation report, including matters raised by



stakeholders and CPBG responses is provided in **Error! Reference source not found.** of the SWMP.

This GWMP was updated to address relevant comments prior to submission to the Environmental Representative (ER) for endorsement. In accordance with the Staging Report (Revision 5), this GWMP was also submitted to the Planning Secretary of the DPE for approval.

Endorsement of this GWMP by the ER is provided in Annexure G.

Rev 1 of the GWMP has been implemented by CPBG for SBT works to date. This review and update has been completed in accordance with Section 9.3 of this plan now that all baseline data is available.

Consultation with Sydney Water, including engagement on monitoring and reporting requirements, will also be undertaken where Sydney Water assets are used to receive discharged water from the SBT Works, as part of a trade waste agreement or similar. The monitoring and reporting requirements for trade waste discharges will be covered under the SWMP for the project.

Consistent with Condition E130 and section 45 of the POEO Act, a Discharge Impact Assessment has been prepared to inform licensing (refer Section 6.1 of the SWMP). An Environment Protection Licence (EPL) (EPL# 21672, last amended 9 February 2023) obtained for the SBT Works is provided in Annexure E.

1.6 Groundwater Regulatory framework and legislation

Groundwater in NSW is regulated by the Department of Primary Industry Water (DPI Water) under the *Water Act 1912* (NSW) and the *Water Management Act 2000* (NSW). If an activity results in the removal of water from a water source, movement of water from one part of an aquifer to another, or movement of water from one water source to another water source, then approval and/or license is required.

The *Water Management Act 2000* requires:

- A Water Access Licence (WAL) with adequate water allocation (or shares) within a specified water management area
- A Water Supply Works Approval authorises the holder to construct and use specified water supply work (dewatering pumps, sump pumps etc.)
- A Water Use Approval to use the water for a particular purpose.

The processes and requirements that DPI Water apply to assess aquifer interference of a project under the *Water Management Act 2000* are outlined in the Aquifer Interference Policy (AIP) (NSW Office of Water (2012)). This assessment process has been considered in the Hydrogeological Interpretative report (refer to Section 2.2). Key components of the AIP are:

- Where an activity results in the loss of water from the environment, a WAL is required under the *Water Management Act 2000* to account for this water take.
- An activity must address minimal impact considerations in relation to the water table, groundwater pressure and groundwater quality.
- Where the actual impacts of an activity are greater than predicted, planning measures must be put in place ensuring there is sufficient monitoring.

For the SBT project, which is a Critical State Significant Infrastructure (SSI) project, the following exemptions are relevant:

- The *Environmental Planning and Assessment Act 1979* (EPA Act 1979) Clause 5.23 Part 1 (g) states that water use approval, water management work approval, or activity approval under the *Water Management Act 2000* is not required for SSI.
- The *Water Management (General) Regulation 2018* under the *Water Management Act 2000* Division 2 Clause 21 exempts transport authorities (including Sydney Metro) from the



requirement for WAL under the *Water Management Act 2000* if the transport authority, after considering the environmental impact of the activity, is satisfied that the activity is not likely to significantly affect the environment.

The project footprint is also subject to the rules of the Sydney Basin Central Groundwater Source which is covered by the Greater Metropolitan Region Groundwater Source Water Sharing Plan.

The water-sharing plan outlines the recommended management approaches of surface and groundwater connectivity, minimisation of interference between neighbouring water supply works, protection of water quality and sensitive environmental areas and limitations to the availability of water.

The Sydney Basin Central Groundwater Source is a porous hard rock aquifer and is considered to be a “less productive” groundwater source as defined in the AIP.

Key considerations for the Sydney Basin Central Groundwater Source with respect to the level 1 minimal harm considerations for a less productive porous rock aquifer and highly productive coastal aquifer (as defined in the AIP) are:

1. Water table impacts:
 - Less than or equal to 10 per cent cumulative variation in the water table allowing for typical climatic 'post-water sharing plan' variations, 40 metres from any high priority groundwater-dependent ecosystem or high priority culturally significant site listed in the Schedule of the water sharing plan.
 - A maximum of two metres cumulative groundwater level decline at any water supply works.
2. Water pressure impacts:
 - A cumulative pressure head decline of not more than two metres at any supply work.
3. Water quality impacts:
 - Any change in the groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.

Developments conducted on waterfront land and along waterways are regulated by the *Water Management Act 2000* in accordance with the *Guidelines for riparian corridors on waterfront land* (DPI-Water 2012). These guidelines state that waterfront land includes the bed and bank of any waterway and all land within 40 metres of the highest bank of the waterbody. The SBT Works footprint does not include waterfront land as defined by the guidelines.

Controlled activities on waterfront land are administered by DPI Water and include removal of vegetation, earthworks and construction of temporary detention basins. A controlled activity approval must be obtained from DPI Water before commencing the controlled activity, however as noted above, a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000* is not required for SSI projects.

An overview of the relevant legislation and policy and their project implications is provided in Table 1-3.

Table 1-3: Key legislative and policy documents

Policy	Relevance
Water Management Act 2000 (NSW)	SSI projects are exempt from requiring some water supply works approvals and controlled activity approvals. Transport authorities (including Sydney Metro) are exempt from requirement for water access licence if the transport authority, after considering the environmental



Policy	Relevance
	<p>impact of the activity, is satisfied that the activity is not likely to significantly affect the environment.</p> <p>Aquifer interference activity approval provisions have not yet commenced but are administered under the Act.</p> <p>Water Sharing Plans are administered under this Act.</p>
Water Act NSW (1912)	Administration of water access licences and trade of water licences and allocations.
NSW Aquifer Interference Policy (2012)	<p>Manages the impacts of aquifer interference activities in accordance with the Water Management Act and Water Sharing Plans.</p> <p>Aquifer interference activities must address minimal impact considerations as outlined in the policy.</p> <p>In the event that actual impacts are greater than predicted there should be sufficient monitoring in place.</p>
Water Sharing Plan, Greater Metropolitan Region Groundwater Sources (2011)	<p>Manages the long-term surface and groundwater resources of a defined area. The plan outlines rules for the sharing and sustainability of water between various uses such as town water supply, stock and domestic, industry and irrigation.</p>
NSW Water Extraction Monitoring Policy (2007)	Sets out monitoring requirements with regards to evaluating aquifer interference.
NSW Groundwater Quality Protection Policy (1998)	Sets out monitoring requirements with regards to degradation of groundwater quality.
NSW Groundwater Quantity Management Policy (2001)	Complements the aquifer interference policy.
NSW Groundwater Dependent Ecosystem Policy (2002)	Sets out guidelines to evaluate potential impacts on groundwater dependent ecosystems.
Australian Groundwater Modelling Guidelines (2012)	Sets out guidelines for developing models appropriate to evaluate potential impacts.

1.7 Related documents

The primary documents supporting this plan include:

- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Chapter 14: Flooding, hydrology and water quality
- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Chapter 15: Groundwater and geology
- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Technical Paper 6: Flooding, hydrology and water quality
- ARUP (2020). Sydney Metro Western Sydney Airport – EIS Technical Paper 7: Groundwater. Ref. SMGW-ARP-AEC-GE-REP-002447. October 2020
- Golder and Douglas Partners (2021). Sydney Metro Western Sydney Airport – Groundwater Monitoring Report – Phase 1 – 4 Locations Ref. 19122621-018-R-GWMR12 Rev 0. 24 March 2021
- Cardno (2021). Sydney Metro Western Sydney Airport – Groundwater Monitoring Report Ref. 8002188-CDO-GWMR5-RPT003 – Rev A 8 September 2021



- Western Sydney Airport Station Boxes and Tunnelling works – Hydrogeological interpretative Report, (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403)
 - Western Sydney Airport Station Boxes and Tunnelling works – Geological interpretative Report, (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).
 - Tetra Tech Major Projects (2022) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works Aerotropolis Detailed Site Investigation Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040515_RevA06
 - Tetra Tech Major Projects (2022) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works Bringelly Services Facility Detailed Site Investigation Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040512_C.01
 - Tetra Tech Major Projects (2022) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works Orchard Hills Station Detailed Site Investigation Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040514_RevA05
 - Tetra Tech Major Projects (2022) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works St Marys Station Detailed Site Investigation Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040513_A03
 - Tetra Tech Major Projects (2023) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works Hydrogeological Report (Project-wide) Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403
 - Tetra Tech Major Projects (2023) Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works Project-wide Groundwater Modelling Report Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040402
 - Tetra Tech Major Projects (2023) Former Dry Cleaner, 1-7 Queen St – Assessment of Human Health Risk and Mitigation Options report (Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040540)
 - Tetra Tech Major Projects (2023) St Marys Station – Implementation of Permeable Reactive Barrier Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040561
 - Tetra Tech Major Projects (2023) Baseline Groundwater Report (Project-wide) Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040405



1.8 Limitations

In addition to data generated to specifically inform the assessment of baseline groundwater conditions and detailed site investigations (DSI) carried out by CPBG, his plan relies on information obtained directly from Sydney Metro, supplied digital databases and the EIS, which includes but is not limited to: groundwater level/pressure, water quality and aquifer parameter data, survey data, laboratory analytical data and engineering borehole logs.

Testing has been carried out across the alignment, however, data gaps and uncertainty regarding site-specific conditions remain. Where site-specific information is not available, reported ranges for the area have been made based upon published information, local experience and correlations.

Detailed site investigations will be carried out during detailed design to verify the parameter recommendations made in this report and inform the development of further detailed predictive groundwater models and refine the monitoring program. Such investigations are yet to be complete and will be incorporated in future revisions of this report.

The following key groundwater related data gaps and limitations are noted:

- The influence of structural geology (i.e. faults, folds and dykes) on groundwater flow behaviour and the mobilisation of existing groundwater contamination.
- The influence of permanent water bodies, open drains and similar on groundwater flow behaviour and interaction with groundwater dependant ecosystems (GDEs).
- Geology and groundwater elevation is characterised along the alignment, however, less information exists off-alignment and extrapolation of ground conditions beyond the alignment for the assessment of groundwater levels and drawdown is required which creates uncertainty in the assessments and predictions.
- Changes to groundwater conditions are expected to have occurred as a result of filling on the airport site. Groundwater monitoring data post filling is extremely limited. This affects the reliability of the assessment of groundwater levels and quality.
- Unidentified sources of existing groundwater contamination may be present.
- Limited long-term groundwater level data is available to characterise historical groundwater conditions including temporal variability. This introduces uncertainty around the nomination of representative stable groundwater levels which are used to derive aquifer boundary conditions for numerical modelling as well as design groundwater levels.
- Due to limitations in the testing and water level monitoring records, there is uncertainty in the outcomes of the assessments completed on behalf of CPBG. This uncertainty extends to the assessment of inflow rates to excavations and the extent and magnitude of drawdown associated with the construction and operation of the WSA SBT. Additional monitoring and assessment to be carried out during construction is expected to reduce the extent of this uncertainty.

Monitoring results during construction will need to be compared with predictions to provide early warning of deviation from anticipated responses. Ongoing comparison against observed conditions and refinement of operation of any mitigation systems (if required) may be needed throughout the construction phase to address the uncertainties in aquifer behaviour and response to construction activities.



2 Physical Setting

2.1 Geology

This section provides an overview of the key geological units across the Project based on the available data. For further detail, refer to the relevant Geotechnical Interpretative Report (GIR, SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).

The geological map for Penrith indicates that the Project alignment is located within the Cumberland Basin and Penrith Basin which forms part of the Permian-Triassic Sydney Basin. The Sydney Basin is a structural trough which is the southern continuation of a much longer structural trough including the Sydney, Gunnedah, and Bowen Basins.

The region is dominated by the mid-Triassic Wianamatta Group of sedimentary rocks while the underlying Hawkesbury Sandstone (also of mid-Triassic age) dominates the Blue Mountains to the west. The late Permian-Early to Middle Triassic Narrabeen Group which lies below the Hawkesbury Sandstone can be observed in the gorges of the Blue Mountains. The underlying Permian Illawarra Coal Measures are exposed along the western margin of the Sydney Basin.

Geological long sections for the Project alignment are presented in Annexure B. Anticipated geological units encountered within the SBT Works sites are described in more detail below, and in the Hydrogeological Interpretative Report (HIR, Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) and GIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).

The three geological units relevant to hydrogeology and groundwater monitoring and management along the alignment are:

Alluvial deposits

Quaternary alluvial deposits are mapped where the Project alignment crosses local waterways such as the lower-lying area of South Creek and its tributaries. The areas of Quaternary Alluvium typically comprise laterally discontinuous layered sequences of silts, clays, and sandy clays with trace carbonaceous inclusions. Localised sandy/gravelly deposits can be found within the alluvial floodplains and in proximity to the existing watercourses and may represent major historical flood events, or creek paleochannels.

Weathered bedrock

Weathered bedrock is characterised by residual soil, extremely weathered rock, and highly weathered rock. Residual soil comprising silty clay produced by surface weathering of the underlying bedrock is expected along the alignment with varying thickness but is generally thicker at the north end of the project. Extremely weathered rock is characterised by very stiff to hard, silty clay, sandy clay, clayey sand. Highly weathered rock however is characterised by frequent fractures and iron-staining which can extend for several metres above the more competent rock. It is frequently friable and generally very low to low strength.

Bedrock

The Bringelly Shale Formation forms the underlying bedrock for the Project alignment and is believed to be about 150m thick below the Project area. It is largely comprised of claystone, siltstone, and laminate, with localised layers of higher strength sandstone. These sandstone beds typically range in thickness from about 0.5 m to 7 m, and often cap the higher hills. Further detail on the geology of the Bringelly Shale Formation is provided in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).



2.2 Hydrogeology

2.2.1 Aquifers

The aquifers present across the Project alignment can be broadly characterised as either the bedrock aquifer of the Wianamatta Group fracture bedrock and Hawkesbury Sandstone formation (bedrock aquifer) or Quaternary alluvium deposit aquifers along drainage lines of tributaries associated with the South Creek. Localised perching of groundwater on the extremely weathered bedrock (which due to its clayey nature is likely to be very low permeability) can also be expected.

Fill

Fill in the form of a mixture of sand, gravel and clay is present in places over the SBT Works sites. Fill is typically thin (less than 2 m thick) and is almost invariably above the groundwater table. Fill may be saturated in places where infiltrated water is perched on the underlying residual clay soil.

Quaternary alluvial aquifer

The Quaternary alluvial aquifer overlies bedrock along the main drainage channels and creek lines including South Creek and its tributaries. Quaternary alluvial deposits typically comprise a mixture of gravels, sands, silts and clays. The alluvial deposits within the channels associated with watercourses typically act as zones of discharge of groundwater from the underlying residual soil and rock. Therefore, while the shallow aquifer can be relatively fresh, during droughts the discharge of groundwater from the bedrock aquifer can resulting an increase in salinity in the shallow aquifer and streams such as South Creek (McNally 2009).

Residual soil

Residual soil derived from the in-situ weathering of Bringelly Shale units typically comprise clay and have low hydraulic conductivity. Outside the alluvial channels, the residual soil has shallow topsoil or fill cover.

Recharge to the aquifer is from rainfall and flow along the soil horizon interface, and therefore closer to perched water than true groundwater (McNally 2009). Rainfall is expected to percolate through the residual soil, potentially leaching salt stored in the residual soils into local waterways, rather than recharging to the underlying Bringelly Shale.

Bedrock aquifers

The bedrock units of the Wianamatta Group (Bringelly Shale, Minchinbury Sandstone and Ashfield Shale) and underlying Mittagong Formation and Hawkesbury Sandstone form heterogeneous fractured rock aquifers where groundwater flows occur within defects within the rock mass. The bedrock aquifers in the Wianamatta Group are typically semi-confined to confined in low lying areas where the residual soils are rich in clay and can act as a confining layer.

The origin of the saline water in the shales and residual soils is thought to be due to windblown aerosols, rather than historically trapped sea water. The salt accumulates by evapotranspiration, and infiltrates into the residual soils, and the underlying shales of the bedrock aquifer (McNally 2009).

Bringelly Shale is the upper rock unit beneath the tunnel alignment. It comprises shale with sandstone bands. Defects including faults, dykes and shear zones are present. Permeability of the intact shale is low with flow occurring through defects associated with bedding, joints, shear zones and fractures. On exposure, the shale swells, and its exposed surface deteriorates with time. The permeability of the sandstone beds may be significantly greater than the intact shale.

As a result of the interbeds of sandstone within the shale, vertical permeability of the rock mass is expected to typically be lower than the horizontal permeability.



2.2.2 Groundwater recharge and discharge

Recharge to the alluvial deposit aquifer is primarily via rainfall recharge. Some recharge from watercourses may occur during periods of high flow and from small farm dams within the area. The watercourses are however expected to act predominantly as the line of groundwater discharge.

Groundwater levels are expected to mound between watercourses with vertical infiltration downward through the residual clay cover and lateral migration from the elevated areas towards the watercourses via the Bringelly Shale.

Due to the low permeability of the residual soil cover, groundwater recharge to the underlying shale aquifers is expected to be low perhaps between 1 and 2 % of the average annual rainfall.

An increase in development around the area is likely to reduce the direct recharge from rainfall.

2.3 Groundwater levels and flow

Groundwater flow is interpreted to be controlled by rainfall infiltration and discharge along the watercourses. As a result, the groundwater flow direction is expected to generally follow topography towards the main drainage channels in a northerly and easterly direction towards Cosgroves Creek, a southerly and easterly direction towards Badgerys Creek and South Creek and westwards towards Duncans Creek. Groundwater levels are typically within 5 m of the ground surface though groundwater is deeper than 5 m depth in the higher ground away from the watercourses.

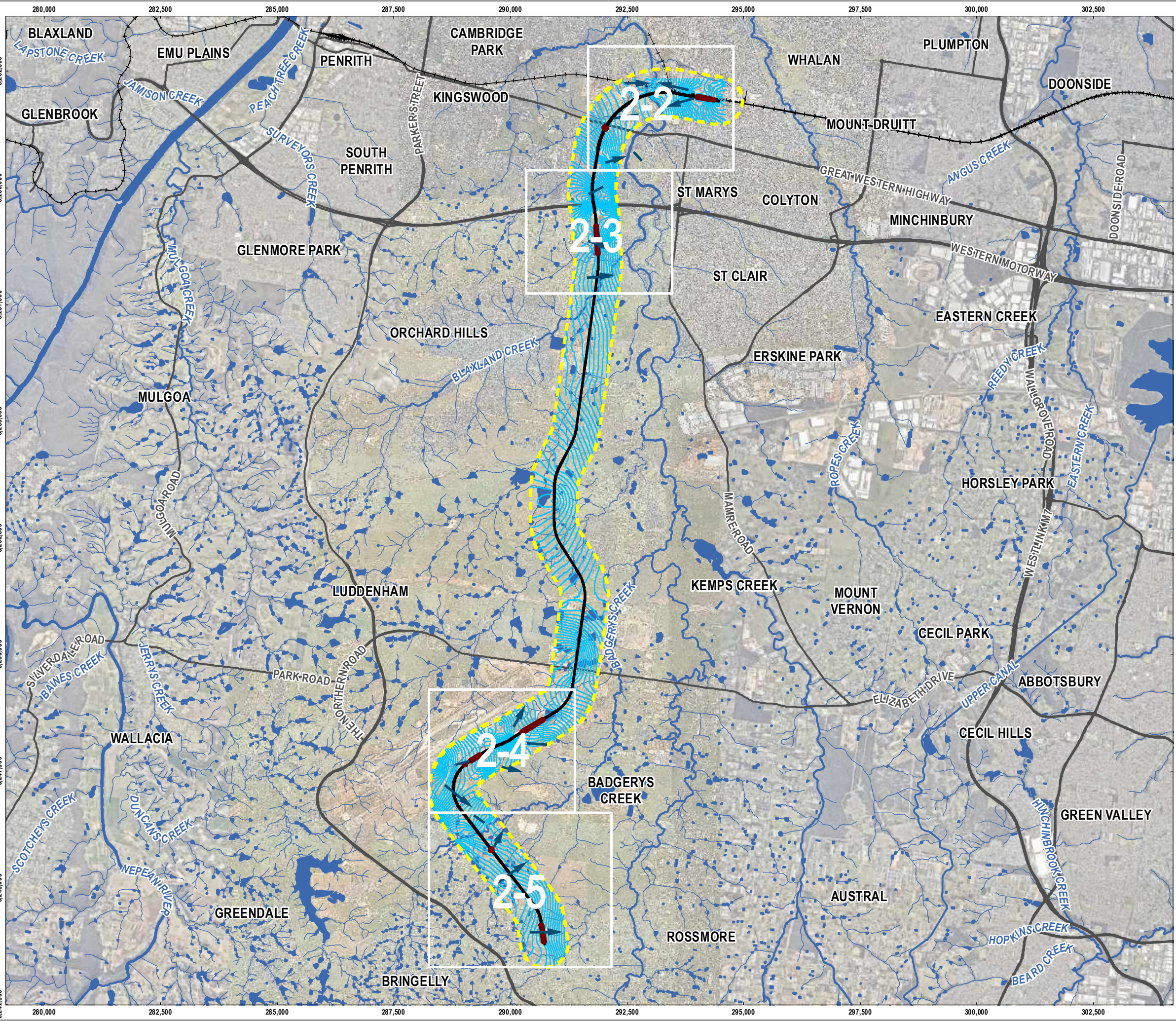
Groundwater level contours have been interpreted based on average baseline groundwater levels, watercourses and topographic contours (Figures 2-1 to 2-5). Groundwater levels used to develop the groundwater contours are provided in Table 8-1 of the Baseline Groundwater Assessment (ref. SMWSASBT-CPG-SWD-SW000-GE-RPT-040405). Groundwater flow is complex, and the interpretation is considered to provide a general indication of the broad pattern of existing groundwater flow. Local-scale influences may not be captured.

Downward head gradients are interpreted to be present away from the watercourses linked to infiltration of rainfall through the residual soil to the deeper rock aquifer. Upward gradient may be present at the water courses where the potentiometric pressures in the deep bedrock are above the base of the creek/watercourse level. This has been reported near the west bank of Claremont Creek (refer Section 13.4.1 of the HIR) and is noted to cause of periodic increases in salinity in South Creek due to the discharge of saline water from the Bringelly shale aquifer (McNally 2009).

More detailed discussion on groundwater level and flow direction along the SBT Works alignment are provided in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).



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LEGEND

- Groundwater Elevation Contour (mAHD)
- Project Alignment
- Project Alignment - Structure
- Railway
- Major Road
- Perennial Watercourse
- Non-perennial Watercourse
- Groundwater Flow Direction
- Waterbody
- Project Alignment Buffer (500 m)

SOURCE
Groundwater contours, groundwater flow direction, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads, rail, watercourses, and waterbodies from DFSI.
Aerial imagery from Nearmap (capture date November, 2022).



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PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 2-1

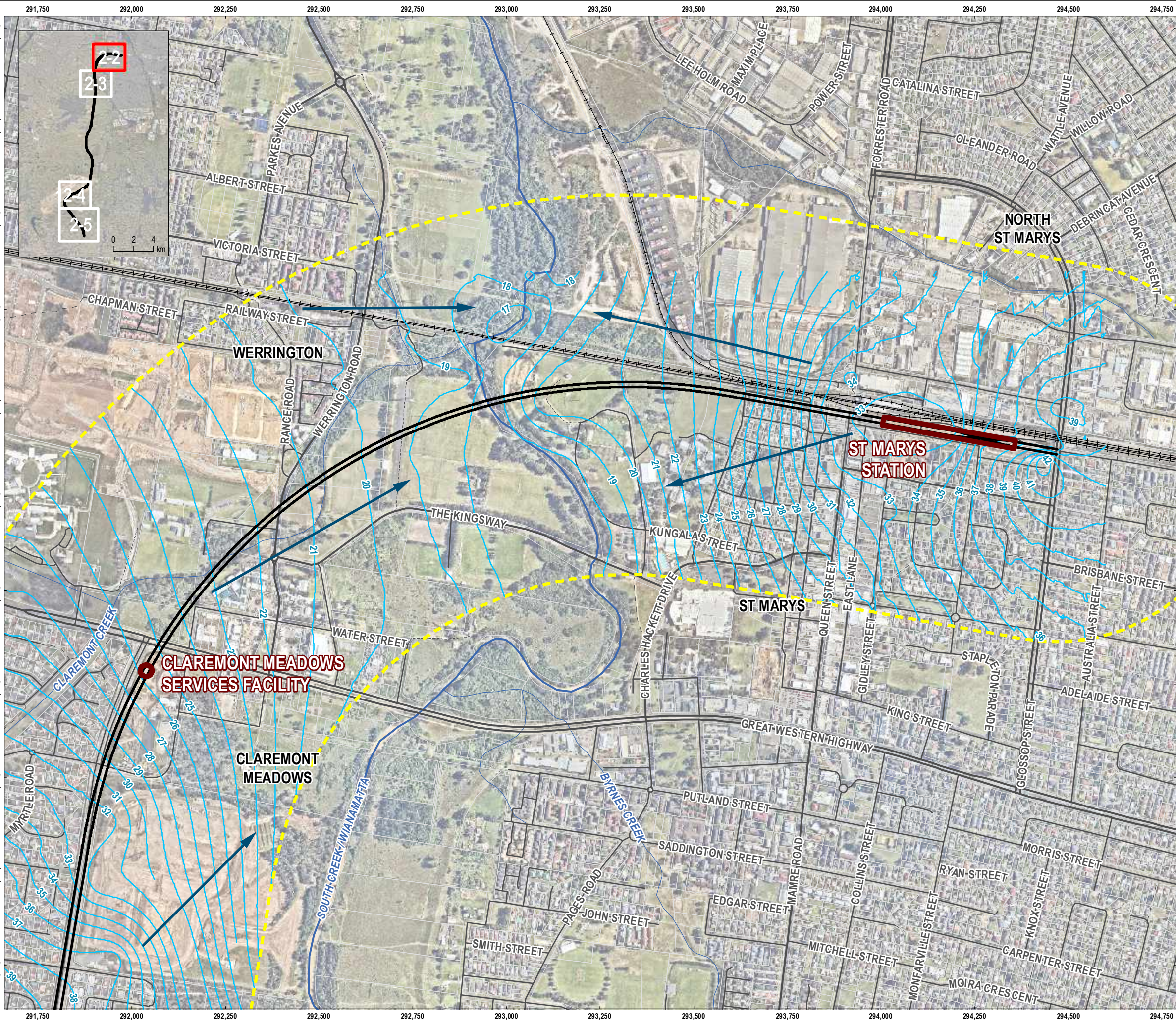
Groundwater Level Contours
Groundwater Monitoring Plan



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LEGEND

- Project Alignment
- Project Alignment - Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Groundwater Elevation Contour (mAHD)
- Groundwater Flow Direction
- Cadastral Boundary
- Project Alignment Buffer (500 m)

SOURCE

Groundwater monitoring wells compiled by Tetra Tech Coffey.
Groundwater contours, groundwater flow direction, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastral, roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date November, 2022).



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CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 2-2

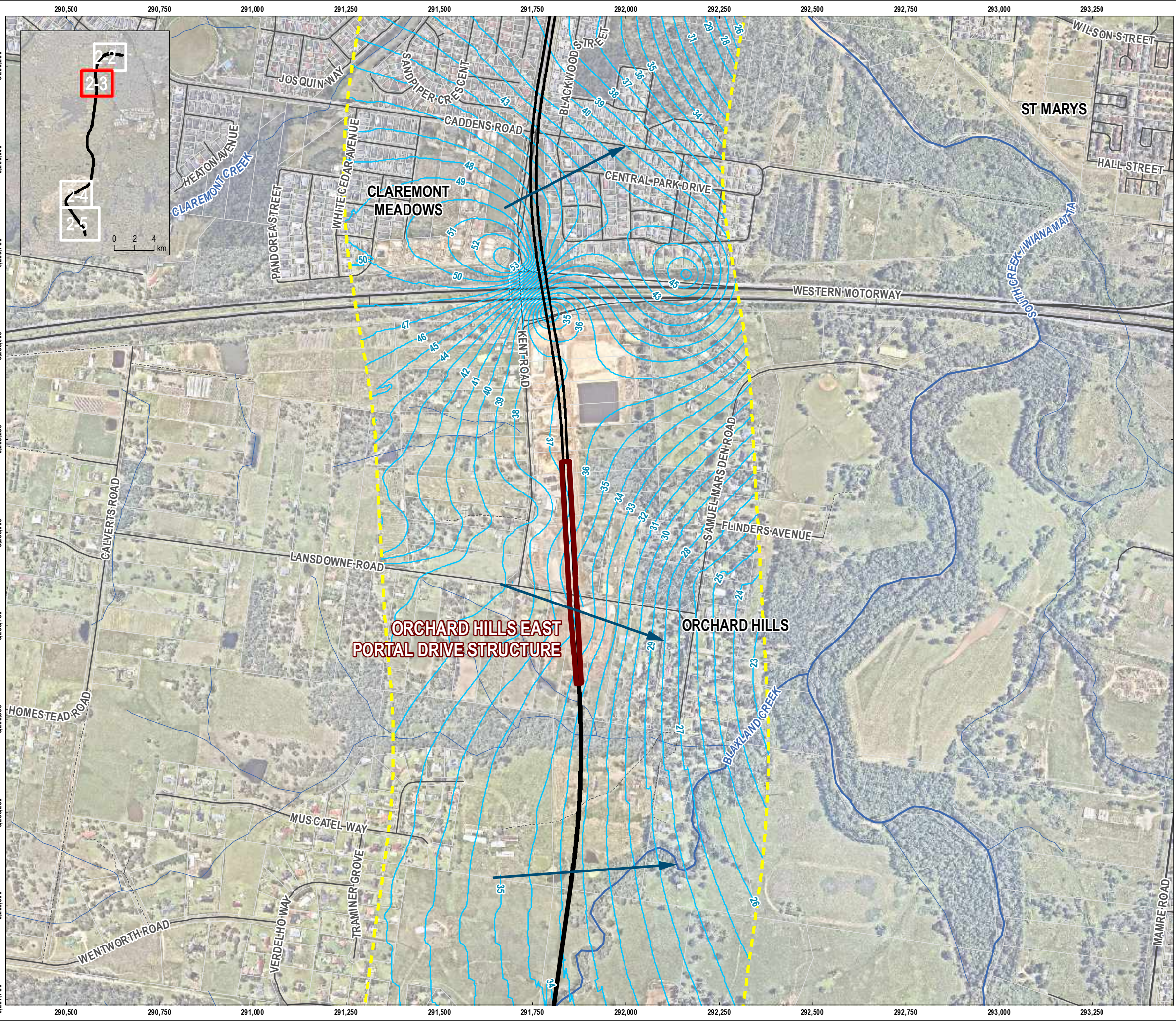
Baseline Groundwater Contours -
St Marys to Claremont Meadows



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LEGEND

- Project Alignment
- Project Alignment - Structure
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Groundwater Elevation Contour (mAHD)
- Groundwater Flow Direction
- Cadastral Boundary
- Project Alignment Buffer (500 m)

SOURCE
Groundwater monitoring wells compiled by Tetra Tech Coffey.
Groundwater contours, groundwater flow direction, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date November, 2022).

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PROJECTION: GDA2020 MGA Zone 56

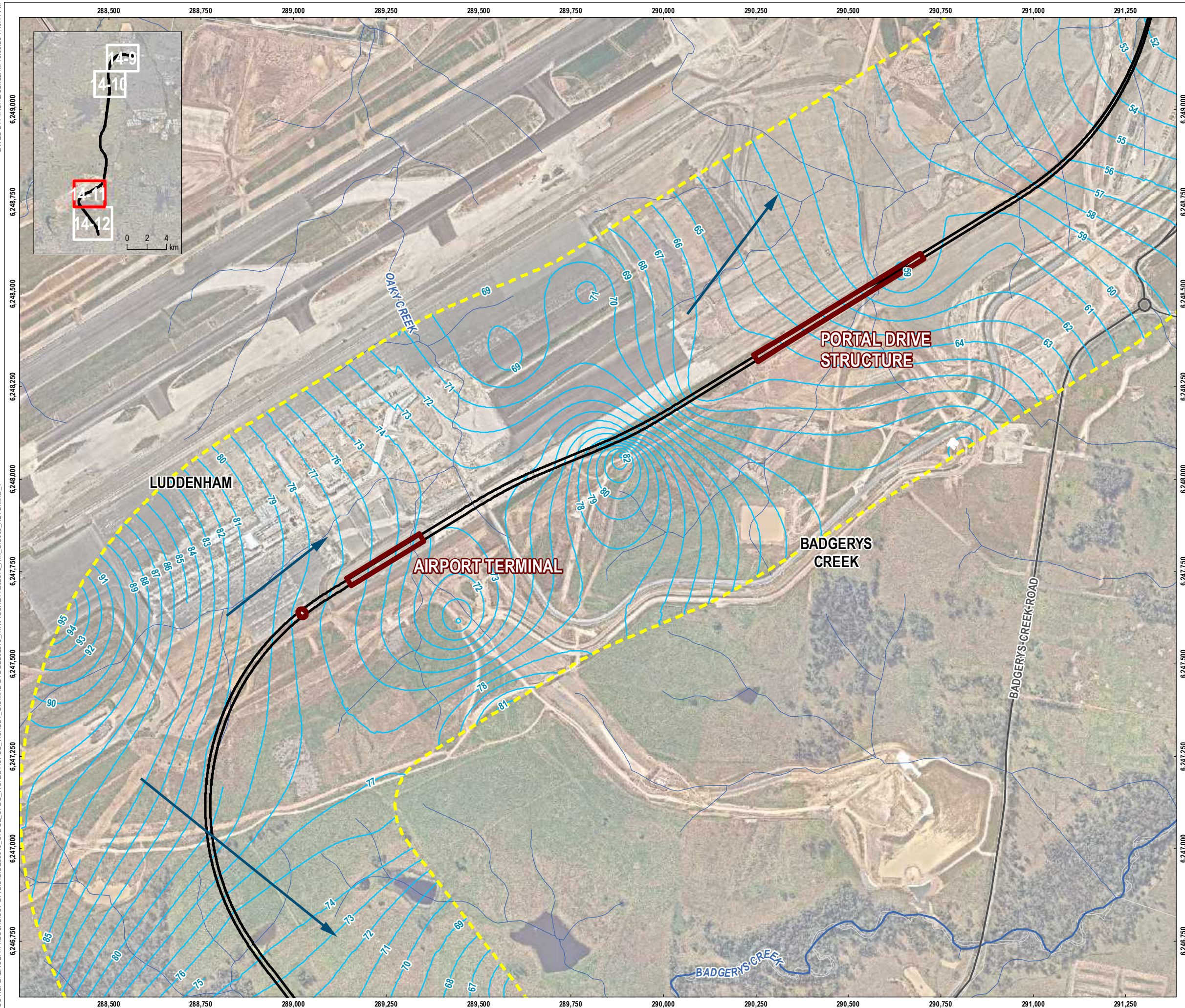
CPB - GHELLA
WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 2-3
Baseline Groundwater Contours -
Claremont Meadows to Orchard Hills













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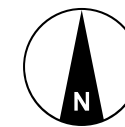


LEGEND

-  Project Alignment
-  Project Alignment - Structure
-  Major Road
-  Minor Road
-  Perennial Watercourse
-  Non-perennial Watercourse
-  Groundwater Elevation Contour (mAHD)
-  Groundwater Flow Direction
-  Cadastral Boundary
-  Project Alignment Buffer (500 m)

SOURCE

Groundwater monitoring wells compiled by Tetra Tech Coffey.
Groundwater contours, groundwater flow direction, and
alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date April, 2022).



0 200 400
m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

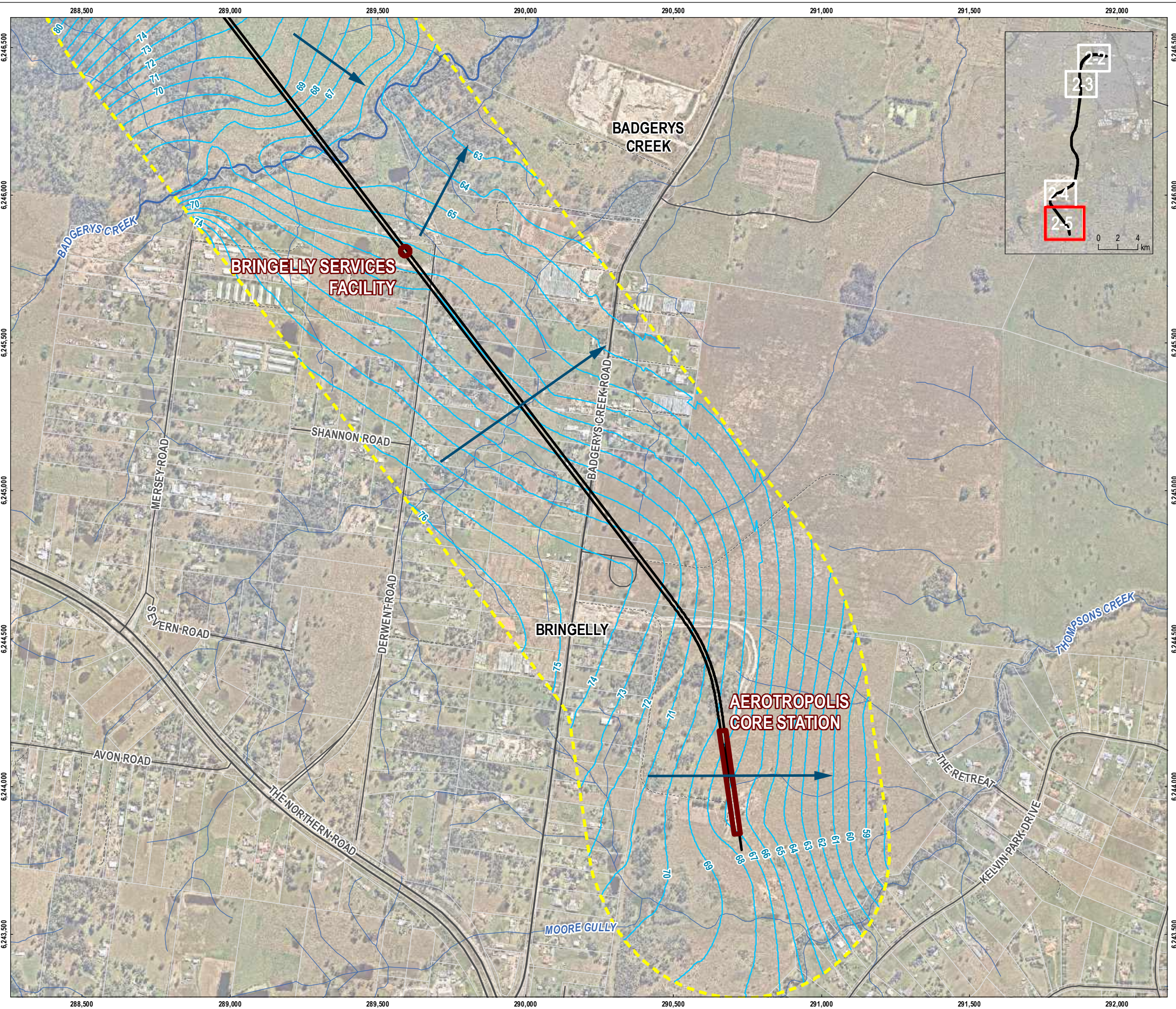
FIGURE 14-11

Groundwater Level Contours












Hydrogeological Interpretive Report



DATE:19.05.23 PROJECT: 754-SYDGE292575 FILE: 292575_HIR_F014-11_GIS_REVB



LEGEND

-  Project Alignment
-  Project Alignment - Structure
-  Major Road
-  Minor Road
-  Track
-  Perennial Watercourse
-  Non-perennial Watercourse
-  Groundwater Elevation Contour (mAHD)
-  Groundwater Flow Direction
-  Cadastral Boundary
-  Project Alignment Buffer (500 m)

SOURCE

Groundwater monitoring wells compiled by Tetra Tech Coffey.
Groundwater contours, groundwater flow direction, and
alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date April, 2022).



0 250 500 m

SCALE 1:12,500

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PROJECTION: **GDA2020 MGA Zone 56**

CPB - GHELLA

WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 2-5

Baseline Groundwater Contours - Bringelly to Aerotropolis



TETRA TECH
COFFEY

DATE: 19.05.23 PROJECT: 754-SYDGE292575 FILE: 292575_HIR_F014-12_GIS_REVB

2.4 Groundwater quality

Groundwater quality along the SBT Works alignment is presented in detail in the HIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) and Baseline Groundwater Report (SMWSASBT-CPG-SWD-SW000-GE-RPT-040405), with a focus on areas where there is the potential for significant interaction with groundwater and where potential groundwater quality issues have been identified. All currently available groundwater quality data is provided in Annexure D, with a summary of baseline groundwater quality by monitoring zone provided in Annexure F (as reported in the Baseline Groundwater Report).

General groundwater quality along the SBT Works alignment is summarised in Table 2.1, with the summary statistics provided separately for the alluvial, residual and bedrock aquifers. Further discussion is provided below and in the baseline groundwater quality summary in Annexure F.

The general characteristics of groundwater across the SBT Works area are:

- Groundwater along the alignment ranges from fresh to saline, generally exceeding 10,000µS/cm. The groundwater EC is typically higher in wells screened in the bedrock and residual soils. The lowest salinity reported (<1,000uS/cm) were reported near South Creek and Claremont Creek between St Marys and Claremont Meadows, indicating that fresh surface water bodies discharge to shallow groundwater in some areas.
- Groundwater along the alignment is generally neutral to acidic, ranging from 3.87 to 11.74 pH units (average pH of 6.54). Generally, pH readings were below 8 pH units. Low pH groundwater (pH <6) along the alignment is commonly associated with elevated metals in the groundwater. Strongly alkaline groundwater (pH>10) has consistently been reported in one location (SMGW-BH-A122) at tunnel depth to the south of Claremont Meadows and the Gipps St Landfill, and in SBT-GW-1806 to the west of Orchard Hills Station.
- Sulfate concentrations in groundwater along the alignment groundwater varied widely. Concentrations do not always correlate with groundwater EC, which is attributed to the presence of organic compounds, including hydrocarbon contamination at several locations along the alignment. The lowest relative sulfate concentrations were reported in groundwater bores at the northern end of the alignment at St Marys, Claremont Meadows, Orchard Hills and to a lesser extent at WSI.
- Groundwater is typically of sodium-chloride water type. An increased sulfate and bicarbonate to chloride ratio is present at some locations in St Marys, along the northern tunnel alignment to the Claremont Meadows Service Facility, and at Bringelly, which is attributed to the hydrocarbon or other organic impact in groundwater in these areas.



Table 2-1: General groundwater quality summary

Parameter	Units	Alluvial	Residual	Bedrock	Alluvial	Residual	Bedrock	Alluvial	Residual	Bedrock	Alluvial	Residual	Bedrock
		No. samples			Minimum			Maximum			Average/ Comment		
TDS	mg/L	43	106	128	468	638	283	26,700	29,500	44,000	10,680	12,422	14,107
EC (Lab)	µS/cm	46	133	144	826	876	390	37,000	35,600	37,200	15,515	18,360	19,173
pH (Field)	pH units	156	134	149	4.32	3.87	3.62	8.38	8.26	11.74	6.49	5.89	7.01
pH (Lab)	pH units	46	134	143	4.20	3.65	3.83	9.31	8.51	12.20	6.82	6.62	7.61
Redox Potential (Field)	mV	95	133	114	-271.7	-392.7	-337.1	301.2	297.4	193.4	-22.5	36.0	-47.4
Chloride¹	mg/L	81	165	172	3	<1	2	454	510	1,290	160	127	299
Calcium	mg/L	84	167	178	86	65	64	13,700	12,600	19,000	5,704	6,487	6,648
Sulfate as SO₄¹	mg/L	84	167	178	12	<0.273	3	3,110	2,220	2,200	620	650	597
Alkalinity (Total)	mg/L	83	165	175	1	<1	<1	1,400	5,100	11,000	466	370	730
Bicarbonate Alkalinity (as CaCO₃)	mg/L	83	165	175	1	<1	<1	1,400	5,100	11,000	464	369	712

1. The summary includes total sulfate and total chloride concentrations as filtered concentrations were similar when analysed for in the same samples



Several suspected or known contamination source areas have been identified on or adjacent to the SBT Works alignment within the areas where groundwater drawdown during construction is predicted to be >1 metre. Sites that were identified as having the potential to result in contamination of groundwater, or where there was no baseline data, are discussed in detail in Section 15 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), and informed the Detailed Site Investigations (DSIs) and baseline groundwater assessment.

Key sites include:

- Former Dry Cleaner – 1-7 Queen St, St Marys
- Harris Street construction laydown area, St Marys
- Industrial area Queen and Phillip Streets, St Marys
- St Marys Plaza
- Current and suspected historical Service Stations to the west of Claremont Meadows Facility
- Gipps Street Landfill
- 34-38 Lansdowne Road, Orchard Hills
- 106-112 Kent Road, Orchard Hills
- 94-98 Kent Road, Orchard Hills
- Former OTC site, Aerotropolis Core Station.

Further discussion on potential sources of groundwater contamination is provided in Section 3.2.2. The data gaps identified and discussed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) were addressed through DSI and the baseline groundwater monitoring to provide an assessment of existing groundwater conditions.

2.5 Groundwater users

A search of the Bureau of Meteorology's Groundwater Explorer database (BOM, 2021) identified 42 registered groundwater bores within 1 km of the SBT Works alignment. Of the 42 registered bores within 1 km of the SBT Works alignment, only two are registered with an extractive use (Table 2-2). All other registered wells are registered for groundwater monitoring purposes and are not considered further.

The two extractive use wells are registered for industrial use and are reported to be over 200 m deep. These wells are expected to access groundwater from the bedrock aquifer which is consistent with the understanding that shallow groundwater typically has a higher salinity that would not be desirable for most extractive uses. Details of the two extractive use wells are summarised in Table 2-2, with the locations shown on Figure C-1, Annexure C.

Table 2-2: Registered groundwater wells with extractive use

Bore ID	Easting	Northing	Drilled Date	Depth	Distance to alignment	Registered Use
GW105382	291651	6255672	19/04/2004	252 m	120 m east	Commercial Industrial
GW105054	291424	6256068	2/10/2002	210 m	152 m west	Commercial Industrial

In addition to registered groundwater users, consideration has also been given to constructed farm dams in areas where groundwater levels approach the ground surface. It is possible that in these areas farm dams may be partly supported by shallow groundwater and construction induced drawdown beneath these dams could potentially result in reduced dam water levels. These conditions may particularly exist around Orchard Hills East portal drive structure and the Bringelly services facility (refer Figures C-3 and C-5, Annexure C). Groundwater bores installed for construction monitoring of groundwater levels in the vicinity of these features are discussed in Section 6.



2.6 Groundwater dependent ecosystems

Groundwater dependent ecosystems (GDEs) are receptors that rely wholly or partially on groundwater to provide all or some of their water needs. GDEs relevant to the SBT Works can broadly be categorised as:

- Terrestrial GDEs: Ecosystems reliant on the subsurface presence of groundwater (i.e., vegetation that is accessing the water table and/or capillary fringe)
- Aquatic GDEs: Ecosystems reliant on the surface expression of groundwater (i.e., wetlands and baseflow fed watercourses).

Terrestrial GDEs are ecosystems with vegetation that rely on the availability of shallow groundwater, which is within reach of the root zone. Mature, large trees are likely to have the deepest root systems and are the most likely vegetation type in a given ecosystem to access groundwater. Two classifications of terrestrial GDEs are recognised:

- Obligate groundwater dependency – where vegetation (or some vegetation in a wider ecosystem) sources most, or all its water requirements from groundwater or the capillary fringe.
- Facultative groundwater dependency – where groundwater may be used periodically either only when it is available, or only when it is required.

Subterranean GDEs have not been mapped in the vicinity of the SBT Works and as such are not considered further. There are also no Ramsar or nationally important wetlands within the study area.

A desktop search of groundwater dependent ecosystems within a 1 km buffer of the SBT Works identified several aquatic and terrestrial ecosystems listed as having moderate or high potential for groundwater dependence (BoM, 2021). Data sources and the assessment process used to identify potential GDEs are detailed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

A detailed description of the suspected aquatic and terrestrial GDEs in the vicinity of the SBT Works is provided in Annexure C, along with figures presenting an overview of the mapped locations.



3 Environmental Impacts

3.1 Construction groundwater inflow and drawdown assessment

The assumed station and facility construction details are outlined in the HIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). The design of various excavations has been amended since tender, with secant pile walls to be used instead of diaphragm walls at both the Claremont Meadows and Bringelly Service Facilities. The effect of this design modification has been assessed in recent versions of the HIR, and the assumed drawdown extents updated for this GWMP.

3.1.1 St Marys Station

The existing groundwater level at the station in the main aquifer is assessed to be 32.5 to 33 mAHD, with some higher levels toward the east end of the station. This level was adopted for the assessment of drawdown impacts associated with construction. A higher level of 34 mAHD was adopted for the assessment of potential sustained groundwater inflow due to periods of sustained high rainfall.

For construction groundwater assessment, it is assumed that groundwater level will be controlled to 18.5 mAHD within the excavation allowing for excavation to facilitate foundation preparation and casting of the base slab.

South Creek is present 800 m to the southwest and a minor tributary of South Creek is present 420 m to the north. The estimated sustained inflow is 0.8L/s if untreated. Higher inflow may occur initially depending upon the rate of excavation. Drawdown of 1m associated with the excavation is assessed to occur for a distance of up to 550 m from the excavation. As a result, the excavation is considered unlikely to influence the nearby watercourses.

Based on the borehole logs Bringelly Shale is interpreted to be present at the bulk excavation level over the lower 16 m of the excavation. Perched groundwater (at the shallow level than the recorded groundwater level within shale) is anticipated in the shallow soil profile at higher elevations than the main aquifer. The groundwater inflow assessment assumed that such shallow groundwater would be address separately by surface drainage or cutoff trenching.

The operational state is not known, but if the station is to be drained during operation, the extent of impact is expected to be similar as described above.

3.1.2 Claremont Meadows Facility

The depth to groundwater at the Claremont Meadows facility has been measured within 2.5 m of the ground surface in places and some dewatering during construction is expected.

Secant walls will be used during construction, which will likely result in a higher magnitude of groundwater drawdown propagating from the construction site when compared with the original diaphragm wall design option.

Claremont Creek is approximately 140 m to the northwest of the facility. Based on the parameters adopted and approach as outlined in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), and making allowance for the presence of Claremont Creek, sustained inflow to the excavation if untreated is estimated to be 0.44L/s, with greater initial inflow in the short term. Minor inflows are expected provided adequate waterproofing is installed. During construction influence is estimated to extend 350 m to the east, and 1 m drawdown of the water table up to 250 m from the excavation. The magnitude of groundwater level drawdown towards the north, where higher hydraulic conductivity alluvial sediments exist, is expected to be limited.



3.1.3 Orchard Hills Station

The Orchard Hills Station excavation is anticipated to extend to about 27 mAHD allowing some over-excavation for the preparation of the floor for the casing of the base slab. A ramp to the ground surface will be constructed to the south and will provide construction access and will form part of the metro rail system.

An ephemeral watercourse is present to the north of the station. This is treated as having little influence on groundwater levels. It is interpreted to act as a zone of groundwater discharge under pre-development conditions.

Based on the parameters outlined in the HIR, the sustained estimated seepage to the station excavation and dive structure is assessed as 0.43 L/s and the extent of the impact is assessed to be within 350 m of the station. This zone of influence does not extend as far as South Creek to the west so no adverse impacts on South Creek are predicted. No existing groundwater bores have been identified within the assessed zone of influence.

Drawdown related settlement is assessed to be less than 5 mm (allowing a drained modulus of 35 MPa and a Poisson's Ratio of 0.3 for depressurisation of up to 5 m of residual soil).

Should approvals be given for the station to be drained during operation, the extent of the impact is as described above. Groundwater ingress to the drained station would need to be addressed possibly involving treatment and release to the surface water system. This would increase the requirements of the system which would otherwise need to deal with the seepage to the drained dive structure.

3.1.4 Bringelly Services Facility

Secant walls will be used during construction of the Bringelly Service Facility, which will likely result in a higher magnitude of groundwater drawdown propagating from the construction site than initially predicted based on previous assumed use of soldier piles or a diaphragm wall.

A pre-development groundwater level of 69 mAHD was adopted for assessment of drawdown impact and construction groundwater seepage inflow based on the records from monitoring location SMGW-BH-D303S.

A sustained construction groundwater seepage inflow of 0.44 L/s is assessed during construction, with minor inflows expected provided adequate water proofing is installed. Drawdown response is expected to be limited to 400 m from the shaft, with greater than 1 m assessed to occur within 200m (north) to 330m (southwest) of the excavation.

3.1.5 Aerotropolis Core Station

The Aerotropolis Cores Station is approximately 200 m to the northwest of Thompsons Creek. Groundwater levels recorded at location SMGW-BH-D326 showed a 1.1 m rise in response to a heavy rainfall event in March 2021 with subsequent recovery to a level of 66.8 mAHD. Based on these measurements a pre-development groundwater level of 67 mAHD was adopted for assessment of construction groundwater inflow and drawdown response.

Borehole logs for the area show thin residual soil cover over Bringelly Shale.

A sustained construction groundwater seepage inflow of 0.49 L/s is assessed if untreated, with a drawdown response limited to 450 m from the shaft. Drawdown greater than 1 m is assessed to occur within 300 m of the excavation.

3.2 Environmental impacts

Potential impacts resulting from the SBT Works before the implementation of mitigation measures were identified and assessed as part of the preliminary groundwater impact assessment as detailed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).



The SBT Works will interact with the groundwater environment during the construction and operational phases. The construction methods and permanent design adopted for the underground structures directly influences how the SBT Works will impact groundwater systems and sensitive receptors.

Table 3-1 summarises key risks posed by the SBT Works to the groundwater environment during construction.

Table 3-1: Key potential construction stage groundwater risks

Issue	Risk
Change in groundwater level	Reduced availability for groundwater-dependent ecosystems (aquatic and terrestrial)
	Reduced availability for existing extractive groundwater users
	Impact on third party structures (property, utilities, and the environment) due to consolidation settlement
	Mounding and barrier effects upstream of buried structures (stations, dive structures) and the tunnel.
Change in groundwater quality	Mobilisation of existing groundwater contamination into previously unaffected areas resulting in unacceptable risk to sensitive receptors/third parties
	Mobilisation or generation of groundwater having quality that is adverse to underground structures
	Degradation of groundwater quality by drawing saline water from the deep bedrock aquifer into possibly fresh to brackish shallow (alluvial) aquifers
	Contamination of groundwater due to surface spills and leaks
	Acidification of groundwater due to oxidation of acid sulphate soil and rock
Disposal of groundwater	Management of groundwater seepage, including potentially contaminated groundwater, into construction excavations or permanent structures resulting in unacceptable impacts at the point of discharge

3.2.1 Registered groundwater users

Extractive use groundwater bores

Extractive groundwater users require consideration of both potential level and quality impacts associated with the SBT Works.

The SBT Works is required to comply with Table 1 – *Minimal Impact Considerations for Aquifer Interference Activities* of the NSW *Aquifer Interference Policy* which specifies that the SBT Works must not result in a cumulative water level decline of more than 2 m at any water supply work (groundwater bore).

Two extractive use bores reported to be over 200 m deep are registered for commercial or industrial use in close proximity (between 120 m and 150 m) to the project alignment. These wells are expected to access groundwater from the bedrock aquifer which is consistent with the understanding that shallow groundwater typically has a higher salinity that would not be desirable for most extractive uses. The project design includes only above-ground infrastructure in this area and no groundwater level or quality impacts are expected as a result of project activities.

Farm dams

It is possible that if dams are constructed in low-lying areas, or where groundwater levels are shallow (i.e., within 2 mbgl), they may have a level of connectivity with the underlying aquifer. Where this occurs, temporary groundwater drawdown could result in temporarily reduced surface water levels in some farm dams.

Make good arrangements could be considered as a contingency mitigation measure during construction if impacts were observed.



3.2.2 Mobilisation of groundwater contamination

Potential sources of groundwater contamination that may be mobilised by construction activities, and data gaps as identified in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), are summarised in Table 3-2.

These data gaps were addressed through a series of DSI completed by Tetra Tech in 2022 and 2023 and the baseline groundwater assessment (discussed in Section 5).

Table 3-2: Potential sources of groundwater contamination and identified data gaps

Area	Site	Current understanding	Identified data gap
St Marys Station	Former dry cleaner	Investigations at site have confirmed presence of chlorinated hydrocarbons in groundwater and vapour at site. The composition (predominantly PCE) and increasing concentrations at depth is consistent with an onsite DNAPL source.	The vertical and lateral extent of chlorinated hydrocarbon impact is unknown.
St Marys Station	Harris St construction laydown area	Former wreckers, workshop, bus depot and plastic manufacturer. There is limited groundwater quality data in area and not in suspected source areas adjacent to the station excavation. UST fill points and pumps were also identified in 2019 on NE corner of Harris and Forrester St within drawdown area.	No groundwater data within or downgradient of suspected source areas
St Marys Station	Former Industrial sites to south of station on Queen and Philip Streets	Former site uses within the predicted 5m draw down area include waterproofer, former service stations and dry cleaner	No groundwater data within or downgradient of suspected source areas
St Marys Station	St Marys Plaza	Former service station and potential chemical storage for backup generators	No groundwater data within or downgradient of the suspected source area, or between the area and station construction area
Claremont Meadows Facility	Possible historic service station	Suspected source within 60m of excavation based on site layout on historic aerial imagery	No groundwater data within the suspected source area, and shallow well downgradient not analysed for petroleum hydrocarbons
Claremont Meadows Facility	Gipps Street Landfill	Previous investigation of the Gipps Street Landfill described in the EIS reported contamination in groundwater derived from landfill leachate including but not limited to ammonia, metals, pesticides, and other organic compounds.	Vertical and lateral extent of impact is not known
Orchard Hills Station	34-38 Lansdowne Road	Suspected use of herbicides and pesticides on cultivated land. Site within predicted drawdown area.	Groundwater data indicates metals contamination is present. Vertical and lateral extent of impact is not known



Area	Site	Current understanding	Identified data gap
Orchard Hills Station	64 Kent Road	Unlicensed waste disposal suspected adjacent to and downgradient of construction area and within predicted drawdown area	No groundwater data within or downgradient of suspected source area, or between the area and station construction area
Orchard Hills Station	94-98 Kent Road	Suspected former cattle or sheep dip, and area of stressed vegetation. Directly on station construction area, and within predicted drawdown area	Elevated metals concentrations in groundwater, and detectable concentrations of hydrocarbons. The vertical and lateral extent of groundwater impact is not known
Airport Dive Portal	Draw down area	No indications of gross contamination, however limited groundwater quality data. Metals, PAH and TRH detected in soil data in vicinity of drawdown area, and PFAS detected soil on alignment in construction area (SMGW-TP-C343).	Limited groundwater data available within predicted groundwater drawdown area
Airport Terminal	Draw down area	No indications of gross contamination, however limited groundwater quality data. Elevated zinc identified in soil in area.	Limited groundwater data available within predicted groundwater drawdown area
Bringelly Service Facility	Draw down area	Elevated strontium detected in groundwater (source unknown). PFAS detected in groundwater, and low level volatile hydrocarbons detected at depth in soil.	Insufficient groundwater data to assess whether contaminant concentrations reported represent maximum in construction/drawdown area
Aerotropolis Core Station	Former OTC site compound	Site inspection in 2019 identified UST, transformer and substation, fire hydrants and pumphouse. PFAS, volatile hydrocarbons and low concentrations of methane and DDD detected in groundwater.	Extent of groundwater impact is unknown

Significant chlorinated hydrocarbon contamination in groundwater has been identified beneath the former dry cleaner at 1-7 Queen St. Existing groundwater quality associated with the chlorinated hydrocarbon contamination associated with the former dry cleaner, and associated environmental impacts, are reported in detail in the following reports:

- *Former Dry Cleaner, 1-7 Queen St – Assessment of Human Health Risk and Mitigation Options* report (Tetra Tech Major Projects, 2023 Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040540);
- *St Marys Station Detailed Site Investigation* (Tetra Tech Major Projects, 2023, Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040513).

With the exception of the former dry cleaner at 1-7 Queen Street, St Marys, the results of the DSIs and baseline groundwater assessment indicate that no active mitigation is required to manage groundwater contamination along the remainder of the alignment. However, the requirement for groundwater management may need to be reviewed, and revised (if necessary), should groundwater conditions change.



3.2.3 Groundwater dependent ecosystems

Where excavation is planned below the water table along the alignment, the SBT Works are expected to interact with the groundwater environment .

Key potential impacts posed by the SBT Works to GDEs during construction and operation are summarised in Table 3-3.

Table 3-3: Key groundwater potential impacts

Issue	Potential impact
Change in groundwater level	Reduced availability for GDEs (aquatic and terrestrial).
	Acidification of groundwater due to oxidation of acid sulfate soil and rock.
Change in groundwater quality	Mobilisation of existing groundwater contamination or saline groundwater into previously unaffected areas resulting in unacceptable risk to sensitive receptors.

A risk-based assessment approach has been adopted to assess the potential impacts to identified GDEs along the SBT Works alignment. The assessment approach adopts a GDE risk ranking matrix that was established for the project (refer to Section 18.4.2 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403)). The risk ranking matrix considers both groundwater level and quality changes, their magnitudes and duration.

This approach is intended to identify potential impacts that would be considered unacceptable or undesirable and allows for alternative engineering design options to be developed, or suitable mitigation measures to be implemented prior to construction commencing.

GDEs and predicted drawdown along the alignment are shown on Figures C-1 to C-5, Annexure C.

Aquatic GDE impact assessment

A preliminary assessment of impacts to aquatic GDEs was undertaken in Section 18.4.3 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). The assessment considered the potential influence of the SBT Works on the following aquatic GDEs:

- South Creek
- Badgerys Creek
- Thompsons Creek

The groundwater inflow and drawdown assessment (Section 17 of the HIR) has concluded that the predicted zone of 1 m groundwater drawdown is unlikely to extend to within 50 m of either South Creek, Badgerys Creek or Thompson Creek. Based on this assessment there is a negligible risk of impact to aquatic GDEs during construction based on the current engineering design and inflow assessment. A lower lower magnitude drawdown of between 0.1 and 1 m was also assessed. Modelling results indicate the 0.1 m drawdown countour does not extend below South Creek or Badgerys Creek

Mitigation measures are currently not proposed for aquatic GDEs but this may be revised in future versions of this document.

Terrestrial GDE impact assessment

The design phase groundwater drawdown estimates adopted for the GDE impact assessment are based on construction phase modelling and drawdown estimates which area presented and discussed in detail in Section 19 of the HIR.



The magnitude of groundwater level drawdown around the rail tunnels and the cross passages during construction is expected to be relatively minor due to the relatively short construction duration and the low hydraulic conductivity of the Bringelly Shale. Therefore, the assessment has been limited to the areas of predicted groundwater level drawdown around dewatered excavations, such as station boxes, portals and other major infrastructure (refer to Section 19.4 of the HIR).

A summary of the terrestrial GDE impact assessment presented the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) is provided in Table 3-4.

Table 3-4: Terrestrial GDE impact assessment summary

SBT Works site	Terrestrial GDE	Assumed GDE type	Potential impact	Risk ranking
Claremont Meadows Facility	Cumberland Shale Plains Woodland east of Gipps Street	Facultative	Unquantified groundwater drawdown (potentially up to 2m) through secant piled walls, estimated for more than 6 months	Moderate
	Claremont Creek riparian zone	Unknown (potentially obligate)	Unquantified groundwater drawdown unlikely to significantly alter levels in alluvial sediments	Minor
Orchard Hills Station	Cumberland Shale Plains Woodland north and east of the station	Facultative	Temporary drawdown in excess of 2 m across large area, persisting for at least 6 months.	Moderate
	Cumberland River Flat Forest south of Lansdowne Road	Facultative	Temporary drawdown in excess of 1 m across large area, persisting for at least 6 months.	Minor
	Cumberland River Flat Forest in South Creek riparian zone	Facultative	Temporary drawdown in excess of 1 m across large area, persisting for at least 6 months.	Minor
Bringelly Services facility	Cumberland Shale Plains Woodland 30 m south of the construction zone	Facultative	Temporary drawdown of approximately 5 m predicted across 1.3 ha stand on private property, persisting for at least 6 months.	Moderate
	Cumberland Shale Plains Woodland 300 m north of the construction zone	Facultative	Temporary drawdown of up to 2 m is predicted to extend beneath the southern edge of the woodland, persisting for at least 6 months.	Moderate
Aerotropolis core	Cumberland River Flat Forest along Thompson Creek riparian zone	Facultative	There are no mapped terrestrial GDEs that fall within the predicted 1 m drawdown contour extending around the station box.	Negligible



4 Environmental control measures

The need for active control measures is based on the identification of where SBT Works may result in an unacceptable risk to a sensitive and relevant groundwater receptor. Mitigation and management measures are then implemented to control impacts to within acceptable levels.

The results of the DSIs and baseline assessment have been reviewed to refine the need for and approach to groundwater mitigation and management. The effectiveness of any measures implemented will be validated through the groundwater construction monitoring program (Section 6).

4.1 Inflow control

Estimate inflows, and the general approach for assessment, are detailed in the Groundwater Modelling Report, ref. SMWSASBT-CPG-SWD-SW000-GE-RPT-040402. The results are replicated in Table 4-1.

The assessments indicate that inflows will be quite low, with local defects potentially resulting in short term higher flows. Localised grouting may be implemented as a control measure where required.

Table 4-1: Estimated long-term inflows at structure locations

Tunnel or Station Box	Estimated long-term inflows	
	L/s, untreated	L/s, treated (Note 3)
Tunnel – North	0.09	(Note 1)
Tunnel – South	0.12	(Note 1)
Cross Passages - North	0.60	(Note 1)
Cross Passages - South	0.30	(Note 1)
St Marys Station	0.80	0.80 (Note 2)
Claremont Meadows	0.44	(Note 1)
Orchard Hills Station	0.37	0.37 (Note 2)
Orchard Hills Dive	0.06	0.06
Airport Dive	0.68	(Note 1)
Airport Terminal Station	0.78	0.78 (Note 2)
Airport TBM Shaft	0.18	(Note 1)
Bringelly Facility	0.44	(Note 1)
Aerotropolis Station	0.49	0.47 (Note 2)

Notes: (1) Minor inflows expected provided adequate waterproofing is installed. Refer to Particular Specs, Cl. 4.1.8 (f) to inflow restriction/waterproofing requirements. Installation of the waterproofing requirements to meet the limits stated as required by the Particular Specs is the responsibility of the constructor.

(2) The operational state of St Marys, Orchard Hills Station, Airport Terminal and Aerotropolis is not known and not included in the scope of this project. Should these stations be drained during operation the extent of the impact is as described above.

(3) Waterproofing applied per the Particular Specifications.



4.2 Groundwater contamination

The results of the DSIs and baseline assessment have been used to refine the need for and approach to groundwater mitigation and management. The need for active control measures has been based on the identification of where project activities may result in an unacceptable risk to a sensitive and relevant groundwater receptor.

Contamination requiring active mitigation has been confirmed at the former Dry Cleaner at 1-7 Queen Street, St Marys, with measures implemented to control impacts to within acceptable levels. Mitigation, management and construction monitoring measures are detailed in:

- *St Marys Station - Remedial Action Plan* (Tetra Tech Major Projects, 2023, SMWSASBT-CPG-SWD-SW000-GE-RPT-040521)
- *St Marys Station – Implementation of Permeable Reactive Barrier* (Tetra Tech Major Projects, 2023, SMWSASBT-CPG-SWD-SW000-GE-RPT-040561).

With the exception of the former Dry Cleaner at 1-7 Queen Street, the risk of adverse groundwater related impacts due to mobilisation of contamination during construction is considered to be low based on the available data, and so other than at St Marys no active groundwater mitigation is proposed. Control measures for groundwater contamination elsewhere along the alignment therefore consist of management via monitoring to assess whether existing conditions change such that there is an adverse change in risk profile.

The effectiveness of any measures implemented will be validated through the groundwater construction monitoring program (Section 6).

4.3 Water Treatment

Groundwater inflows, TBM process water, and washdown water from construction activities will be treated using the dedicated water treatment plants (WTPs) located at St Mary's, Claremont Meadows, Orchard Hills, Bringelly, and Aerotropolis. Following treatment, the WTPs will discharge effluent either to receiving waterways or to trade waste (sewer) depending whether environmental criteria for discharge to waterways are achieved. On-site beneficial reuse of treated effluent is also considered a viable option to support dust suppression measures.

All WTPs will include a minimum seven-step treatment process that has been designed to significantly improve water quality, prior to the discharge of treated effluent into receiving waterways.

Each site will include an approximately 20,000 litre storage tank that will be used to store treated water prior to discharge. The treated water storage tanks will include a "high water" level trigger that will activate pumped discharge from the storage tank to receiving waterways via existing stormwater connections or proposed conveyance structures. Discharge will cease once the "low water" trigger level is reached.

Details of the proposed water treatment processes and the resulting effects on water quality are summarised in Table 4-2, noting that treatment to reduce salinity is not proposed, and saline water will need to be discharged as trade waste if not acceptable for release to waterways.

Table 4-2: Minimum Water Treatment Plant Processes

Site Location	WTP Process
Primary Solids Removal	First order reduction of suspended solids and suspended contaminants.
Flocculation / Coagulation	Second order reduction of turbidity suspended solids, and suspended contaminants. Coagulant aids may be used to improve softening of water and enhance reduction in concentrations of dissolved solids / contaminants.



Site Location	WTP Process
Clarification	Third order reduction of turbidity suspended solids, and suspended contaminants. Combination softening-clarification units may improve and enhance reduction in concentrations of dissolved solids / contaminants.
Media Filtration	Fourth order reduction of turbidity and suspended solids, and suspended contaminants. May be used with softening process to reduce concentrations of dissolved solids / contaminants.
Breakpoint Chlorination	Reduce concentrations of ammonia.
Activated Carbon Filtration	Remove organic contaminants, hydrocarbons, chlorine, PFAS, chloramines, nitrate, and improve colour and odour.
pH Correction	Adjustment of pH to appropriate discharge limits.

4.4 GDE Mitigation Measures

Moderate potential for adverse effects has been identified at several locations along the project alignment (Claremont Meadows facility, Orchard Hills station, and Bringelly services facility) where dewatering is likely to cause groundwater levels to be temporarily drawn down below the root zone of facultative terrestrial GDEs for a period of greater than six months.

In many cases these facultative GDEs may be unaffected by short term dewatering where there are sufficient alternative sources such as rainfall and soil moisture. However, given the high ecological value of the Cumberland Shale Plain Woodland and Cumberland River Flat Forest, and in the absence of site-specific assessment of groundwater dependence, a conservative assessment has been adopted assuming that any temporary decline in tree health would be considered unacceptable.

Table 4-3 summarises the recommended monitoring and mitigation measures to minimise potential impacts (such as declining tree health or dieback) to terrestrial GDEs assessed as having moderate risk rankings. Monitoring requirements are detailed further in Section 6.

Table 4-3: Groundwater assessment, monitoring and mitigation measures – terrestrial GDEs

Measure	Proposed action	Description
Assessment	Groundwater drawdown assessment	Refinement of the potential zone of native vegetation impact based on numerical groundwater modelling, groundwater level and quality monitoring, and confirmation of the period of dewatering.
	Pre-construction groundwater level monitoring	Additional groundwater monitoring wells have been installed in the vicinity of suspected GDEs to assess the zone of drawdown during construction (Section 6). These additional wells provide an improved assessment of potential groundwater dependence and will be used to determine baseline conditions.
	Vegetation and groundwater dependence assessment	Areas of Cumberland Shale Plain Woodland and Cumberland River Flat Forest within areas of predicted temporary (greater than 6 months) or permanent groundwater level drawdown greater than 1 metre around Claremont Meadow Facility, Orchard Hills, Bringelly service facility, and Aerotropolis Core station should be assessed to determine their groundwater dependence. Site specific tests should be conducted by ecologists and hydrogeologists to determine vegetation reliance on groundwater and refine the predicted impact as a result of drawdown.



Measure	Proposed action	Description
Monitoring	Groundwater level and quality monitoring	<p>A program of groundwater level and quality monitoring will be implemented during construction, and for an agreed period of operation while groundwater levels recover.</p> <p>Levels should be monitored at least weekly (monitoring via data loggers at six hourly intervals is proposed as detailed in Section 6.1.3).</p> <p>Periodic review of monitoring results will consider whether drawdown is progressing in line with modelled estimates or if additional areas of terrestrial GDE may require management.</p>
	Tree health monitoring	<p>Periodic tree health monitoring will be conducted in the Claremont Meadow Facility, Orchard Hills, Bringelly service facility, and Aerotropolis Core station areas during construction and for an agreed period during operation by ecological specialists. Monitoring will guide the need for further mitigation (such as manual tree watering) or longer-term mitigations.</p>
Mitigation system	Manual tree watering	<p>Where the tree health monitoring program identifies signs of declining tree health during construction, and groundwater monitoring confirms a reduced water table, manual tree watering events should commence until tree health recovers, or until groundwater levels recover post-construction (where permanent drawdown is not expected).</p> <p>Manual watering events will continue during low rainfall periods until tree health recovers, or groundwater levels recover to levels that return supply to the root zone.</p>
		<p>Ecologists should assess the ecosystem condition, tree maturity and other aspects (such as presence of juvenile trees) of areas of Cumberland Shale Plain Woodland and Cumberland River Flat Forest in areas of predicted impact around Claremont Meadow Facility, Orchard Hills, Bringelly service facility, and Aerotropolis Core station to determine the net effect of permanently reduced groundwater access.</p>

The monitoring and mitigation measures presented in Table 4-3 are considered appropriate and effective to manage the potential impacts of temporary groundwater level drawdown.

Contingencies should unforeseen permanent drawdown occur, or vegetation dieback occur despite the proposed mitigation as provided in Table 4-4..

Table 4-4: Proposed contingency mitigation and offsets for terrestrial GDEs

Measure	Description	Proposed design
Contingency measure	Replanting	<p>Where long term drawdown occurred and tree health monitoring indicated the likely declining health in the absence of manual watering, the affected area would be replanted with juvenile trees.</p> <p>As these juvenile trees mature in the absence of groundwater, they will adapt to the new groundwater conditions and replace affected trees over the long term.</p>
Contingency measure	Native vegetation offset	<p>In the case where tree health monitoring identifies dieback or expects dieback to occur in the future as a result of project activities and the ecosystem cannot be appropriately maintained by replanting in the time available, native vegetation offsets will be secured.</p>



5 Groundwater monitoring – baseline conditions

The following section summarises the baseline groundwater assessment completed to inform existing conditions and refine the construction monitoring program.

All groundwater monitoring locations along the alignment, including pre-award bores and project bores installed by CPBG, are shown on figures in Annexure C.

5.1 Pre-award Data

The pre-award project monitoring network was installed between 2019 and 2023, and consists of 78 existing groundwater monitoring bores, and 52 vibrating wire piezometers (VWPs) installed at 30 locations along the alignment. Monitoring bores were designed to target the following three hydrogeological units:

- Quaternary alluvial aquifer
- Residual soils, including perched water
- Bedrock aquifer, predominantly in the Bringelly Shale.

Groundwater quality data was also available from nine (9) groundwater wells installed at Western Sydney International (WSI), with these wells sampled up to eight times between March 2017 and April 2019.

Data from these monitoring locations is included in Annexure D and was included in the Baseline Groundwater Assessment (SMWSASBT-CPG-SWD-SW000-GE-RPT-040405).

5.2 Baseline groundwater assessment

To inform existing conditions, support the DSIs and provide the construction monitoring network, 55 groundwater bores and 55 vibrating wire piezometers (VWPs) were installed by CPBG at 88 locations along the alignment.

In addition to informing baseline conditions, where required, data from these locations was included in the DSIs to address identified contamination data gaps. A number of bores also were specifically installed to monitor where the potential for environmental impacts during construction has been identified, or where existing wells will either be destroyed or become dry during construction, and no existing monitoring locations are available as an alternative.

The details of depth, co-ordinates and target stratigraphic unit for all monitoring bores and VWPs sampled or monitored for the baseline assessment, including pre-award bores, are listed in Table 5-1 and 5-2 respectively. Table 5-2 also indicates locations where data loggers have been installed. The location of all bores and VWPs included in the baseline assessment are shown on Figures 5-1 and 5-2.

All newly installed monitoring bores were sampled for water quality at least once for the full analytical suite as detailed in Table 7-2, Section 7, and levels gauged to supplement the existing baseline dataset. Most bores were sampled three times, with a limited analytical suite adopted for the second and third rounds where no PFAS or hydrocarbon contamination was identified when analysed for the full analytical suite.

A number of existing groundwater monitoring bores had not previously been sampled and/ or had not been analysed for a full analytical suite, including some nearby suspected contamination sources. Where these bores still existed, and could be accessed, they were also sampled as part of the baseline assessment program to provide as complete a baseline assessment as possible. In total 23 pre-award groundwater monitoring bores were sampled as part of the baseline assessment at least once for the full analytical suite.



The initial screening criteria used to assess baseline groundwater quality included:

- ANZECC/ARMCANZ 2000 relevant physical and chemical stressors
- ANZG (2018) 95% species protection criteria for freshwater water, with criteria for toxicants known to bioaccumulate assessed based on the 99% species protection criteria
- PFAS National Environmental Management Plan (NEMP 2.0) 99% species protection values
- Australian Standard AS2159 – 2009 Piling design and installation have also been considered to assess potential groundwater aggressivity risks posed by groundwater to underground concrete and steel structures (discussed in Section 20.2 of the HIR).
- Discharge concentration limits negotiated with EPA as detailed in L2.4 of Environmental Licence (EPL 21672, amended 10 March 2023)
- Airports (Environment Protection) Regulations (AEPR) 1997 guidelines (on-airport locations only).

A summary of the baseline groundwater quality is provided in Annexure F. Summary tables are provided for each monitoring area with the minimums, maximums and average concentrations for key parameters for each aquifer, and comparison to the screening criteria.

Detailed presentation and discussion of the baseline groundwater data is provided in the baseline groundwater assessment (SMWSASBT-CPG-SWD-SW000-GE-RPT-040405).

Baseline groundwater quality associated with the chlorinated hydrocarbon contamination from the former dry cleaner at 1- 7 Queen Street, St Marys is detailed in the following reports:

- *Former Dry Cleaner, 1-7 Queen St – Assessment of Human Health Risk and Mitigation Options* report (Tetra Tech Major Projects, 2023 Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040540);
- *St Marys Station Detailed Site Investigation* (Tetra Tech Major Projects, 2023, Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040513).



Table 5-1: Construction details of groundwater monitoring bores able to be sampled for baseline assessment

Well ID	Alternate ID	Monitoring Zone	Date Installed	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-CM-1022	SBT-GW-1022	St Marys	14-Jul-22	Bedrock	293832.3	6261980.6	34.287	9 - 12	22.3 - 25.3	
SBT-CM-1030	SBT-GW-1030	XPN13 / Tunnel	17-Aug-22	Residual/Bedrock	291923.5	6260911.5	36.807	2 - 6	30.8 - 34.8	
SBT-GW-0001	-	St Marys	NK	Unknown	293910.9	6261970.2	35.21	NK	NK	
SBT-GW-0001B	-	St Marys	4-May-23	Bedrock	293910.9	6261970.2	35.211	8.5 - 14.5	20.7 - 26.7	
SBT-GW-1001	SBT-GW-1001_S	St Marys	6-May-22	Residual/Bedrock	294435.2	6261848.3	48.827	2 - 8	40.8 - 46.8	
SBT-GW-1002	-	St Marys	15-Aug-22	Residual/Bedrock	294464.6	6261979.9	42.605	2 - 8	34.6 - 40.6	
SBT-GW-1005	SBT-GW1005_S	St Marys	28-Jul-22	Residual/Bedrock	294262.4	6261825.2	44.195	2 - 8	36.2 - 42.2	
SBT-GW-1012	-	St Marys	12-Dec-22	Residual/Bedrock	293930.5	6261971.2	35.361	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1013	-	St Marys	8-Dec-22	Residual/Bedrock	293931.4	6261964.9	35.398	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1014	-	St Marys	8-Dec-22	Residual/Bedrock	293931.8	6261959.4	35.471	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1016	-	St Marys	7-Oct-22	Residual/Bedrock	293905.8	6261847.7	36.122	5 - 10	26.1 - 31.1	
SBT-GW-1017	-	St Marys	27-Sep-22	Residual/Bedrock	293646.1	6262114.9	32.475	2 - 8	22.5 - 30.5	
SBT-GW-1019R	SBT-GW-1019_r	St Marys	1-Sep-22	Bedrock	293888.3	6261978.7	35.196	13.9 - 18	17.2 - 21.3	
SBT-GW-1020	SBT-CM-1020	St Marys	9-Jun-22	Alluvium	293862.0	6261980.1	34.943	2 - 7	27.9 - 34.9	
SBT-GW-1021	-	St Marys	21-Aug-22	Residual/Bedrock	293847.8	6262056.4	33.906	2 - 8	25.6 - 31.6	
SBT-GW-1024	-	Claremont Meadows SF	20-May-22	Alluvium/Bedrock	292108.9	6261303.0	28.506	3 - 12	NK	
SBT-GW-1031	-	XPN14/ Tunnel	4-Aug-22	Bedrock	291872.1	6260654.0	40.808	15 - 20	20.8 - 25.8	



Well ID	Alternate ID	Monitoring Zone	Date Installed	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-1037	SBT-GW-1037_S	Orchard Hills Station	4-Aug-22	Residual/Bedrock	291757.7	6259320.6	40.544	2 - 8	32.5 - 38.5	
SBT-GW-1042	-	Orchard Hills Station	17-Jun-22	Alluvium	291874.7	6259123.7	40.069	2 - 8	32.1 - 38.1	
SBT-GW-1043	SBT-GW-1043_S	Orchard Hills Station	8-Aug-22	Alluvium/Bedrock	291876.5	6259087.8	39.631	2 - 8	31.6 - 37.6	
SBT-GW-1048	-	Orchard Hills Station	12-Aug-22	Alluvium/Bedrock	291955.6	6259007.4	39.642	2 - 8	31.6 - 37.6	
SBT-GW-1063	-	Orchard Hills Station	30-Sep-22	Alluvium/Bedrock	292193.5	6258861.3	31.558	2 - 11	20.6 - 29.6	
SBT-GW-1347a	-	St Marys	10-May-23	Alluvial	293953.9	6261962.4	35.734	6 - 9	26.7 - 29.7	
SBT-GW-1347b	-	St Marys	10-May-23	Residual/Bedrock	293954.9	6261962.8	35.712	12 - 15	20.7 - 23.7	
SBT-GW-1347c	-	St Marys	9-May-23	Bedrock	293954.6	6261962.2	35.74	17 - 20	15.7 - 18.7	
SBT-GW-1348a	-	St Marys	15-May-23	Alluvial	293952.9	6261956.1	35.796	5.5 - 8.5	27.3 - 30.3	
SBT-GW-1348b	-	St Marys	12-May-23	Residual/Bedrock	293954.0	6261955.9	35.831	11 - 14	21.8 - 24.8	
SBT-GW-1348c	-	St Marys	11-May-23	Bedrock	293953.4	6261957.0	35.848	17 - 20	15.8 - 18.8	
SBT-GW-1803		St Marys	27-Mar-23	Bedrock	294375.8	6261850.4	47.649	16.5 - 25.5	22.2 - 31.2	Installed to replace SMGW-BH-A103
SBT-GW-1804		South Creek	26-Aug-23	Residual	292194.9	6261580.1	21.021	3 - 5	16.0 - 19.0	Installed to replace SMGW-BH-A107S
SBT-GW-1805		Claremont Meadows SF	4-Apr-23	Residual	292046.7	6261326.1	27.296	3 - 9	18.3 - 24.3	Installed to replace SMGW-BH-A109S
SBT-GW-1806		Orchard Hills	3-Apr-23	Bedrock	291755.3	6258999.8	42.957	15 - 24	19 - 28	Installed to replace SMGW-BH-A017
SBT-GW-1807		Orchard Hills	3-Mar-23	Bedrock	291901.4	6258843.1	37.479	10 - 16	21.5 - 27.5	Installed to replace SMGW-BH-A117
SBT-GW-1808		Orchard Hills	3-Mar-23	Residual	291902.3	6258845.2	37.455	2 - 5	32.5 - 35.5	Installed to replace SMGW-BH-A117S
SBT-GW-3003-A	SBT-GW-3003	Portal / XPS01	11-Aug-22	Bedrock	290425.6	6248380.7	67.706	2 - 5	62.7 - 65.7	



Well ID	Alternate ID	Monitoring Zone	Date Installed	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-3003-B	SBT-GW-3004	Portal / XPS01	11-Aug-22	Bedrock	290424.6	6248382.2	67.378	10 - 13	54.4 - 57.4	
SBT-GW-3003-C	SBT-GW-3005	Portal / XPS01	10-Aug-22	Bedrock	290423.4	6248384.0	67.328	19 - 22	45.3 - 48.3	
SBT-GW-3006	SBT-BH-3006, SBT-GW-3006_w	Airport Terminal	29-Jun-22	Bedrock	289368.0	6247844.4	84.305	29 - 35	49.3 - 55.3	
SBT-GW-3012-A	-	Airport Terminal	28-Aug-22	Bedrock	289133.2	6247685.6	83.958	2 - 8	76 - 82	
SBT-GW-3012-B	-	Airport Terminal	28-Aug-22	Bedrock	289134.8	6247682.9	83.9	10 - 16	67.9 - 73.9	
SBT-GW-3012-C	-	Airport Terminal	28-Aug-22	Bedrock	289136.4	6247680.3	83.777	20 - 26	57.8 - 63.8	
SBT-GW-3022	-	Airport Terminal	1-Aug-22	Bedrock	289446.1	6247614.1	77.776	3 - 15	62.8 - 74.8	
SBT-GW-4000	-	Western Sydney Airport	1-Dec-22	Bedrock	289140.5	6246360.3	72.235	2.5 - 13	59.2 - 69.7	Replaced SMGW-BH-C209 for XP monitoring
SBT-GW-4003	-	Bringelly SF	23-Jun-22	Residual/Bedrock	289518.7	6245851.2	71.932	2 - 7	64.9 - 69.9	
SBT-GW-4005	SBT-BH-4005	Bringelly SF	26-May-22	Bedrock	289666.8	6245749.6	73.613	10 - 20	53.6 - 53.6	
SBT-GW-4008	SBT-BH-4008	Cross passage / Tunnel	2-Nov-22	Bedrock	290230.0	6244991.9	78.269	22 - 28	50.27 - 56.27	
SBT-GW-4010	-	Aerotropolis - Bringelly	3-Jun-22	Bedrock	290427.4	6244758.3	78.779	22 - 28	50.78 - 56.78	Replacement for SMGW-BH-D205
SBT-GW-4014	SBT-GW-4014_S	Aerotropolis Station	1-Aug-22	Residual/Bedrock	290632.2	6243966.3	73.902	5 - 14	59.9 - 68.9	
SBT-GW-4017	-	Aerotropolis Station	26-May-22	Residual	290805.8	6243870.8	71.334	2 - 12	59.3 - 61.3	
SBT-GW-4019	SBT-BH-4019	Aerotropolis Station	28-Jul-22	Bedrock	290669.6	6243885.0	75.875	20 - 30	45.9 - 55.9	
SBT-GW-4021	-	Aerotropolis Station	26-Aug-22	Alluvium/Bedrock	291112.5	6243748.0	62.847	2 - 11	51.9 - 60.9	
SBT-GW-4800	-	Bringelly SF	29-Mar-23	Residual/Bedrock	289626.6	6245830.0	71.432	2 - 7	64.4 - 69.4	Installed to replace SBT-GW-4002
SBT-GW-4801	-	Bringelly SF	30-Mar-23	Residual/Bedrock	289580.1	6245835.6	71.372	4 - 16	55.4 - 67.4	Installed to replace SBT-GW-4020



Well ID	Alternate ID	Monitoring Zone	Date Installed	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-4802	-	Bringelly SF	30-Mar-23	Bedrock	289583.3	6245761.2	74.348	4 - 16	58.4 - 70.4	Installed to replace SBT-GW-4022
SBT-GW-4803	-	Aerotropolis	28-Mar-23	Bedrock	290647.1	6244147.5	72.657	5 - 11	61.7 - 67.7	Installed to replace SMGW-BH-D310
SMGW-BH-A107	-	TBM Tunnel - South Creek	5-Dec-19	Bedrock	292413.0	6261713.0	22.5	19 - 26	-3.5 - 3.5	
SMGW-BH-A122	-	Claremont Meadows SF	11-Dec-19	Bedrock	291893.0	6260308.0	41.4	25 - 35	6.4 - 16.4	
SMGW-BH-A315	-	Orchard Hills	11-Feb-21	Residual/Bedrock	291726.6	6258863.8	42.28	4 - 10	32.3 - 38.3	
SMGW-BH-A361	-	St Marys	28-Jun-21	Bedrock	293852.4	6261984.6	34.871	11 - 17	17.9 - 23.9	
SMGW-BH-A401	-	St Marys	6-Oct-21	Residual/Bedrock	294106.3	6261997.8	36.51	3 - 9	27.5 - 33.5	Replacement for SBT-GW-1008
SMGW-BH-B120	-	Luddenham Road	17-Jan-20	Bedrock	290964.0	6253779.0	52.6	5 - 14	38.6 - 47.6	
SMGW-BH-B123	-	Luddenham Road	22-Jan-20	Bedrock	290939.0	6253035.0	57.2	5 - 14	43.2 - 52.2	
SMGW-BH-B317	-	Orchard Hills	30-Mar-21	Residual/Bedrock	291440.3	6254935.2	44.23	1.5 - 4.5	39.7 - 42.7	Department of Defence access required
SMGW-BH-B319	-	Orchard Hills	NK	Residual/Bedrock	291172.9	6254263.9	50.02	1.8 - 4.8	45.2 - 48.2	
SMGW-BH-C320	-	Western Sydney Airport	8-Mar-21	Residual/Bedrock	289629.3	6246534.9	66.47	3 - 9	57.5 - 63.5	
SMGW-BH-C321	-	Western Sydney Airport	10-Mar-21	Residual/Bedrock	289808.6	6246630.0	63.45	1.5 - 6	57.4 - 61.9	
SMGW-BH-C324	-	Western Sydney Airport	12-Mar-21	Residual/Bedrock	289732.8	6246812.8	67.78	4 - 10	57.8 - 63.8	
SMGW-BH-C330	-	Western Sydney Airport	8-Mar-21	Bedrock	289535.1	6246506.5	69.35	3 - 9	60.3 - 66.3	
SMGW-BH-C332	-	Western Sydney Airport	8-Mar-21	Bedrock	289459.4	6247135.2	81.83	4 - 9	72.8 - 77.8	
SMGW-BH-D109S	-	Aerotropolis	2-Apr-20	Bedrock	290715.8	6243821.2	72.4	5.95 - 8.95	63.4 - 66.4	
SMGW-GW01	GW01, GW-01	St Marys	1-May-19	Residual	293863.6	6261984.7	35.12	4.5 - 7.5	27.6 - 30.6	



Well ID	Alternate ID	Monitoring Zone	Date Installed	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SMGW-GW02	GW02, GW-02	St Marys	1-May-19	Residual	293887.3	6261984.0	35.39	5 - 8	27.4 - 30.4	
WSA GW05	WSA GW05	WSI	NK	Unknown	288574.0	6246161.0	74	5 - 10	64 - 67	
BH207	-	M12	NK	Unknown	292342.0	6251217.0	40	5.9 - 17.9	22.1 - 34.1	
BH209	-	M12	NK	Unknown	292587.0	6251246.0	39.4	0.5 - 18.2	21.2 - 38.9	
MW02	-	Aerotropolis	NK	Unknown	291241.0	6243734.0	61.5	3 - 6	55.5 - 58.5	
MW1	BH1, MW-1	St Marys	NK	Residual	293889.0	6261976.0	NK	4.3 - 7.3	NK	
MWO1	-	Aerotropolis	NK	Unknown	290928.0	6244381.0	68.1	3 - 6	62.1 - 65.1	



Table 5-2: VWP's installed to inform baseline conditions and monitor levels during construction

Location	Well ID	VWP Sensor ID	VWP Installation Date	As-built Easting	As-built Northing	Ground Surface Elevation (mAHD)	VWP Installation Depth (m)	VWP Instrument Elevations (mAHD)	Logger Installed
Aerotropolis	SBT-GW-4014	SWD-TU400-39565-VWP04-A	08/01/2022	290629.58	6243965.78	73.749	26	47.749	Yes
Aerotropolis	SBT-GW-4014	SWD-TU400-39565-VWP04-B	08/01/2022	290629.58	6243965.78	73.749	23	50.749	Yes
Aerotropolis	SBT-VWP-4403	SWD-TU400-39287-VWP01	08/12/2022	290678.80	6244221.52	72.636	15.13	57.506	Yes
Aerotropolis	SBT-VWP-4404	SWD-TU400-39340-VWP02	08/12/2022	290713.24	6244100.06	71.031	15.20	55.831	Yes
Aerotropolis	SBT-VWP-4405	SWD-TU400-39532-VWP03	08/10/2022	290633.34	6244057.27	73.797	18.63	55.167	Yes
Aerotropolis	SBT-VWP-4406	SWD-TU400-39606-VWP05	28/07/2022	290746.98	6243921.43	72.535	28	44.535	Yes
Airport Portal	SBT-VWP-3400	SWD-TU300-33586-VWP01	08/02/2022	290421.72	6248468.38	65.723	15	50.723	Yes
Airport Portal	SBT-VWP-3401	SWD-TU300-33565-VWP02	08/08/2022	290542.13	6248450.48	67.466	15	52.466	Yes
Airport Terminal	ABP-TD300	ABP-TD300-VWP01	29/11/2022	290453.70	6248468.38	62.94	7.84	55.1	Yes
Airport Terminal	ABP-TD300	ABP-TD300-VWP02	29/11/2022	290453.70	6248468.38	62.94	7.84	55.1	Yes
Airport Terminal	ABP-TD300	ABP-TD300-VWP03	29/11/2022	290453.70	6248468.38	62.94	7.84	55.1	Yes
Airport Terminal	ABP-TD300	ABP-TD300-VWP04	29/11/2022	290453.70	6248468.38	62.94	7.84	55.1	Yes
Airport Terminal	ATL-SN350-VWP01	SWD-TU300-34874-VWP03-01	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	ATL-SN350-VWP01	SWD-TU300-34874-VWP03-02	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	ATL-SN350-VWP01	SWD-TU300-34874-VWP03-03	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Location	Well ID	VWP Sensor ID	VWP Installation Date	As-built Easting	As-built Northing	Ground Surface Elevation (mAHD)	VWP Installation Depth (m)	VWP Instrument Elevations (mAHD)	Logger Installed
Airport Terminal	ATL-SN350-VWP01	SWD-TU300-34874-VWP03-04	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	ATL-SN350-VWP02	SWD-TU300-34893-VWP04-01	24/11/2022	289287.18	6247775.06	82.5	23.95	60	Yes
Airport Terminal	ATL-SN350-VWP02	SWD-TU300-34893-VWP04-02	24/11/2022	289287.18	6247775.06	82.5	23.95	60	Yes
Airport Terminal	ATL-SN350-VWP02	SWD-TU300-34893-VWP04-03	24/11/2022	289287.18	6247775.06	82.5	23.95	60	Yes
Airport Terminal	ATL-SN350-VWP02	SWD-TU300-34893-VWP04-04	24/11/2022	289287.18	6247775.06	82.5	23.95	60	Yes
Airport Terminal	SBT-VWP-3402	ATL-SN350-VWP01-01	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	SBT-VWP-3402	ATL-SN350-VWP01-02	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	SBT-VWP-3402	ATL-SN350-VWP01-03	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	SBT-VWP-3402	ATL-SN350-VWP01-04	25/11/2022	289293.55	6247837.34	84.6	25.59	60	Yes
Airport Terminal	SBT-VWP-3403	ATL-SN350-VWP02-01	24/11/2022	289287.18	624777.06	82.504	23.95	60	No
Airport Terminal	SBT-VWP-3403	ATL-SN350-VWP02-02	24/11/2022	289287.18	624777.06	82.504	23.95	60	No
Airport Terminal	SBT-VWP-3403	ATL-SN350-VWP02-03	24/11/2022	289287.18	624777.06	82.504	23.95	60	No
Bringelly SF	SBT-VWP-4400	SWD-TU351-37371-VWP04	21/06/2022	289609.96	6245825.35	71.313	21	50.313	Yes
Bringelly SF	SBT-VWP-4401	SWD-TU351-37377-VWP05	16/06/2022	289570.22	6245793.49	73.530	21	52.530	Yes
Bringelly SF	SBT-VWP-4402	SWD-TU351-37471-VWP06	20/06/2022	289666.84	6245755.19	73.516	21	52.516	Yes
Claremont Meadows	SBT-GW-1028	SWD-TU100-20071-VWP07-A	26/05/2022	292050.01	6261167.99	30.813	28	2.813	Yes





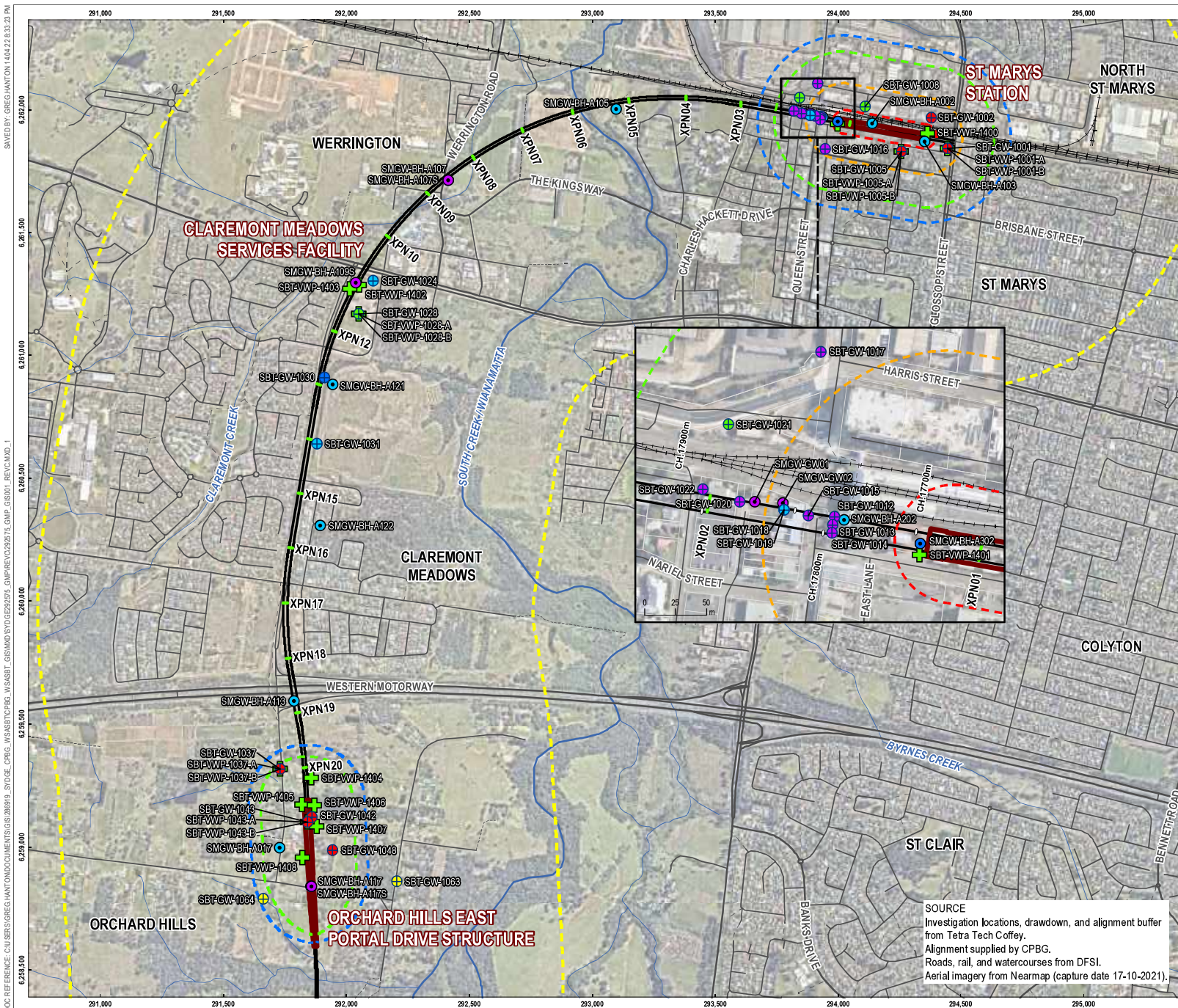
SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Location	Well ID	VWP Sensor ID	VWP Installation Date	As-built Easting	As-built Northing	Ground Surface Elevation (mAHD)	VWP Installation Depth (m)	VWP Instrument Elevations (mAHD)	Logger Installed
Claremont Meadows	SBT-GW-1028	SWD-TU100-20071-VWP07-B	26/05/2022	292050.01	6261167.99	30.813	28	2.813	Yes
Claremont Meadows	SBT-VWP-1402	SWD-TU100-19957-VWP05-01	18/11/2022	292049.66	6261277.91	26.872	20.87	6	Yes
Claremont Meadows	SBT-VWP-1402	SWD-TU100-19957-VWP05-02	18/11/2022	292049.66	6261277.91	26.872	20.87	6	Yes
Claremont Meadows	SBT-VWP-1402	SWD-TU100-19957-VWP05-03	18/11/2022	292049.66	6261277.91	26.872	20.87	6	Yes
Claremont Meadows	SBT-VWP-1403	SWD-TU100-19992-VWP06-01	21/11/2022	292018.33	6261280.67	26.948	20.95	6	Yes
Claremont Meadows	SBT-VWP-1403	SWD-TU100-19992-VWP06-02	21/11/2022	292018.33	6261280.67	26.948	20.95	6	Yes
Claremont Meadows	SBT-VWP-1403	SWD-TU100-19992-VWP06-03	21/11/2022	292018.33	6261280.67	26.948	20.95	6	Yes
Orchard Hills	SBT-GW-1037	SWD-TU150-21965-VWP01-A	08/04/2022	291758.78	6259323.57	39.597	23	16.597	Yes
Orchard Hills	SBT-GW-1037	SWD-TU150-21965-VWP01-B	08/04/2022	291758.78	6259323.57	39.597	23	16.597	Yes
Orchard Hills	SBT-GW-1043	SWD-TU150-22193-VWP05-A	08/09/2022	291875.98	6259094.91	39.499	19	20.499	Yes
Orchard Hills	SBT-GW-1043	SWD-TU150-22193-VWP05-B	08/09/2022	291875.98	6259094.91	39.499	19	20.499	Yes
Orchard Hills	SBT-VWP-1404	SWD-TU150-22010-VWP02	08/05/2022	291860.78	6259289.87	38.810	16	22.810	Yes
Orchard Hills	SBT-VWP-1405	SWD-TU150-22115-VWP03	16/06/2022	291809.07	6259171.24	39.582	16	23.582	Yes
Orchard Hills	SBT-VWP-1406	SWD-TU150-22120-VWP04	19/08/2022	291856.09	6259233.73	36.429	14.5	21.929	Yes
Orchard Hills	SBT-VWP-1407	SWD-TU150-22205-VWP06	08/10/2022	291885.11	6259049.02	40.280	16	24.280	Yes
Orchard Hills	SBT-VWP-1408	SWD-TU150-22333-VWP07	08/11/2022	291819.18	6258954.04	40.795	16	24.795	Yes
St Marys	SBT-GW-1001	SWD-TU100-17275-VWP01-B	05/06/2022	294435.35	6261848.20	49.155	29	20.155	Yes
St Marys	SBT-GW-1001	SWD-TU100-17275-VWP01-A	05/06/2022	294435.35	6261848.20	49.155	29	20.155	Yes



Location	Well ID	VWP Sensor ID	VWP Installation Date	As-built Easting	As-built Northing	Ground Surface Elevation (mAHD)	VWP Installation Depth (m)	VWP Instrument Elevations (mAHD)	Logger Installed
St Marys	SBT-GW-1005	SWD-TU100-17443-VWP03-A	28/07/2022	294262.15	6261823.15	44.557	31	13.557	Yes
St Marys	SBT-GW-1005	SWD-TU100-17443-VWP03-B	28/07/2022	294262.15	6261823.15	44.557	31	13.557	Yes
St Marys	SBT-VWP-1400	SWD-TU100-17351-VWP02	11/04/2022	294366.53	6261901.00	37.671	22.95	14.721	Yes
St Marys	SBT-VWP-1401	SWD-TU100-17720-VWP04	08/05/2022	294001.37	6261933.76	36.407	23	13.407	Yes
XP-S07/ Airport Terminal Temp Shaft	SBT-VWP-3404	SWD-TU351-35209-VWP01	25/01/2023	289022.34	6247666.51	84.630	26.92	58.1	Yes
XP-S07/ Airport Terminal Temp Shaft	SBT-VWP-3405	SWD-TU351-35240-VWP02	25/01/2023	288984.85	6247640.40	84.580	26.78	57.8	Yes





LEGEND

-
- Legend**
- Proposed VWP
 - Existing Monitoring Bore
 - Bedrock
 - Residual
 - Residual/Bedrock
 - Proposed Monitoring Bore
 - Alluvium/Bedrock
 - Bedrock
 - Residual
 - Residual/Alluvium
 - Residual/Bedrock
 - Screened Lithology TBC
 - Project Alignment
 - Project Alignment Cross Passage
 - Project Alignment Structure
 - Railway
 - Major Road
 - Minor Road
 - Track
 - Path
 - Perennial Watercourse
 - Non-perennial Watercourse
 - Project Alignment Buffer (1 km)
 - Predicted Groundwater Drawdown**
 - 1 m
 - 2 m
 - 5 m
 - 10 m



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PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

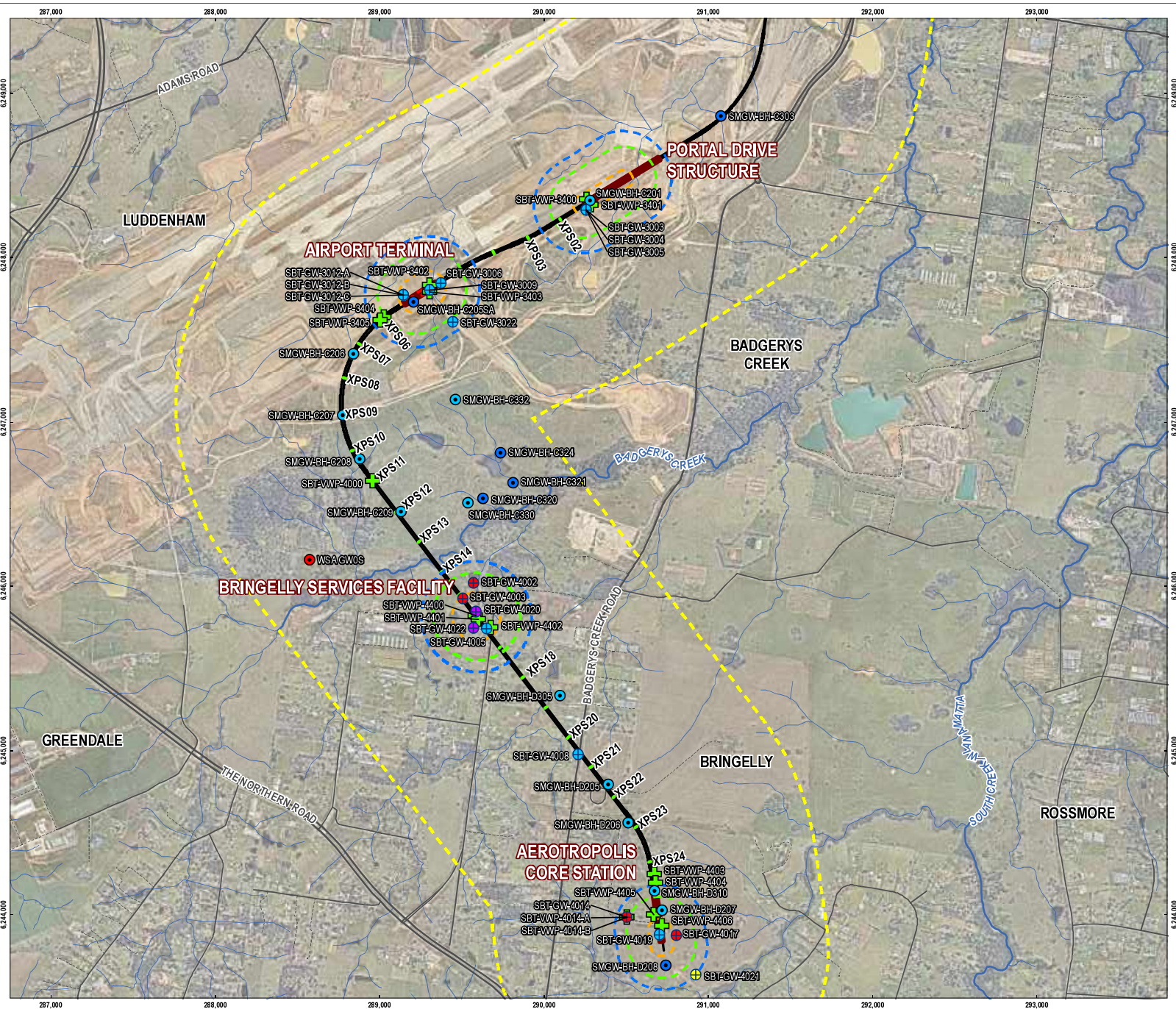
WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 5-1






















Detailed Site Investigation and Baseline Assessment - Groundwater Bore and VWP Locations Groundwater Monitoring Plan



DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-1_GIS_REV0



LEGEND

-  Proposed VWP
- Existing Monitoring Bore
-  Bedrock
 -  Residual/Bedrock
 -  Screened Lithology TBC
- Proposed Monitoring Bore
-  Alluvium/Bedrock
 -  Bedrock
 -  Residual
 -  Screened Lithology TBC
-  Project Alignment
-  Project Alignment Cross Passage
-  Project Alignment Structure
-  Major Road
-  Minor Road
-  Track
-  Perennial Watercourse
-  Non-perennial Watercourse
-  Project Alignment Buffer (1 km)
- Predicted Groundwater Drawdown
-  1 m
 -  2 m
 -  5 m
 -  10 m

SOURCE

Investigation locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).



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PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 5-2

Detailed Site Investigation and Baseline Assessment - Groundwater Bore and VWP Locations Groundwater Monitoring Plan



DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-2_GIS_REV0

5.3 GDE monitoring

To meet condition C16 (c) with requirement for “*sentinel groundwater monitoring bores will be installed between the saline sources and that of each construction excavation site*” electrical conductivity (EC) and groundwater level data loggers have been installed at 16 locations to continuously monitor conditions in select wells during the construction phase (discussed further in Section 6.1.2).

Levels and EC have been recording hourly since installation, with all data downloaded in the first week of August 2023. Level and EC ranges and averages for baseline period for all locations where loggers have been deployed are summarised in Table 5-3. For locations where logger data was not yet available data ranges based on pre-award and baseline sampling events is instead provided.

Baseline level and EC data indicate that hourly recording of EC and levels during construction is appropriate as it allows diurnal patterns of vegetation water-use to be captured.

Six of the locations are to be monitored to specifically assess potential risks to groundwater dependent ecosystems (GDEs). The baseline data will to be used to develop site specific trigger values (SSTVs) to assess conditions during construction. SSTVs developed by an Environment Institute of Australia and New Zealand’s Certified Environmental Practitioner (Site Contamination) (CEnvP (SC)) are provided in Table 6-10 in Section 6.4.

The data review process (Section 8.3) will include comparison of data with groundwater level loggers installed in nearby control locations away from mapped GDEs to identify where changes in levels are due to seasonal variation rather than project related.

Data is proposed to be downloaded and manual gauging on a monthly basis, as detailed in Section 6.4.



Table 5-3: Baseline groundwater EC and levels in GDE monitoring wells

Location	Area	Assumed End of Baseline Conditions	Data date range	Average EC (uS/cm)	Minimum EC (uS/cm)	Maximum EC (uS/cm)	Average Ground water Level mAHD	Minimum Ground water Level mAHD	Maximum Ground water Level mAHD	Comment
SMGW-BH-A105S	Cross passages	Pre-TBM	26/05/2020 - 16/02/2021	2,310	2,140	2,550	-	-	-	
SMGW-BH-A107	Cross passages	Pre-TBM	1/08/2023 - 4/08/2023	3,749	3,736	3,753	21.2	20.9	21.6	
SBT-GW-1804	Cross passages	Pre-TBM	26/07/2023 - 4/08/2023	3,730	3,727	3,732	18.8	18.7	19.0	Installed to replace SMGW-BH-A107S
SBT-GW-1805	Claremont Meadows	17-03-23	23/05/2023 – 23/06/2023	2,750	2,480	3,100	25.1	24.7	25.6	Installed to replace SMGW-BH-A109S
SBT-GW-1028	Claremont Meadows	17-03-23	Unable to access – asbestos exclusion zone							
SBT-GW-1042	Orchard Hills	16-12-22	23/11/2022 - 13/12/2022	12,150	11,900	12,400	37.8	37.7	37.8	
SBT-GW-1063	Orchard Hills	16-12-22	21/04/2023 - 4/08/2023	12,502	11,650	13,293	25.6	25.4	25.7	
SMGW-BH-A315	Orchard Hills	16-12-22	14/07/2023 - 4/08/2023	2,157	1,842	2,878	39.4	38.8	40	
SBT-GW-3006	Airport Terminal	01-03-23	30/11/2022 - 19/01/2023	2,420	2,340	2,510	74.3	72.9	74.6	
SBT-GW-3003-A	Airport Terminal	01-03-23	9/06/2023 - 4/08/2023	24,846	24,485	25,052	63.5	63.7	63.9	
SBT-GW-3003-B	Airport Terminal	01-03-23	9/06/2023 - 4/08/2023	17,389	1,024	20,281	59	55	63	
SBT-GW-3003-C	Airport Terminal	01-03-23	9/06/2023 - 4/08/2023	24,845	20,465	25,052	59.5	59.4	59.6	
SBT-GW-4000	Cross passages	Pre-TBM	14/06/2023 - 4/08/2023	13,148	13,023	13,317	70.7	70.5	70.9	Replacement for SMGW-BH-C209 (change in XP location)
SBT-GW-4010	Aerotropolis	02-03-23	15/05/2023 - 4/08/2023	21,739	20,451	21,868	73.6	73.3	73.8	Installed to replace SMGW-BH-D205



Location	Area	Assumed End of Baseline Conditions	Data date range	Average EC (uS/cm)	Minimum EC (uS/cm)	Maximum EC (uS/cm)	Average Ground water Level mAHD	Minimum Ground water Level mAHD	Maximum Ground water Level mAHD	Comment
SBT-GW-4008	Aerotropolis	02-03-23	15/05/2023 - 4/08/2023	17,847	17,416	18,622	72	72	72.2	Replaced SMGW-BH-D305 due to access denied by landowner
SBT-GW-4021	Aerotropolis	02-03-23	<i>01/12/2022 - 18/01/2023</i>	<i>21,700</i>	<i>21,400</i>	<i>22,000</i>	<i>59.9</i>	<i>59.8</i>	<i>59.9</i>	

Italics denotes manual data presented

Blue shading indicates data collected outside baseline conditions but considered to be valid for development of SSTVs



6 Construction monitoring

Groundwater level and quality monitoring will be carried out at a combination of existing and newly CPBG installed monitoring bores and VWP. Following the completion of the baseline groundwater assessment (SMWSASBT-CPG-SWD-SW000-GE-RPT-040405), the construction monitoring program was reviewed and refined in accordance with Section 9 of this program (Review and Improvement). Based on a review of all available baseline data, the locations initially proposed for inclusion in the construction monitoring, frequency of sampling and appropriate ongoing analytical suite have been updated.

6.1 Construction Timing

The start of the construction in each monitoring area based on where the current construction plan indicates that excavation will begin below the water table is summarised in Table 6-1.

Table 6-1: Construction phase timing

Monitoring area	Construction below water table
St Marys Station	17 March 2023 (Eastern end of Station box, Zone 1) 22 July 2023 (Western end of Station box, Zone 4)
Claremont Meadows Facility	17 March 2023
Orchard Hills Station	16 December 2022
Airport Portal Dive	14 February 2023
Airport Terminal Station	1 March 2023
Bringelly Services Facility	17 January 2023
Aerotropolis Core Station	2 March 2023
Airport Terminal TBM Shaft	1 May 2023
Cross Passages	refer Table 4-2

Construction dates for cross passages are summarised in Table 6-2. The construction start is based on drilling of weep holes, and completion is based on date when weep holes are grouted.

Table 6-2: Cross passage construction timing

Cross Passage ID	Proposed Date	
	Commenced	Completed
Northern Tunnel		
XP N2	29/03/2024	02/08/2024
XP N3	19/03/2024	13/08/2024
XP N4	08/03/2024	14/07/2024
XP N5	26/02/2024	15/06/2024
XP N6	15/02/2024	08/08/2024
XP N7	22/01/2024	20/05/2024
XP N8	20/01/2024	30/05/2024
XP N9	16/01/2024	11/05/2024
XP N10	04/01/2024	17/04/2024
XP N11	09/12/2023	11/04/2024
XP N12	<i>Claremont Meadows Service Facility</i>	
XP N13	18/11/2023	09/03/2024



Cross Passage ID	Proposed Date	
	Commenced	Completed
XP N14	12/11/2023	28/02/2024
XP N15	05/11/2023	15/03/2024
XP N16	29/10/2023	29/02/2024
XP N17	24/10/2023	19/02/2024
XP N18	16/10/2023	24/02/2024
XP N19	08/10/2023	10/02/2024
XP N20	30/09/2023	17/01/2024
XP N21	22/09/2023	26/01/2024
Southern Tunnel		
XP S2	17/06/2023	27/11/2023
XP S3	04/07/2023	15/01/2024
XP S4	17/08/2023	14/12/2023
XP S5	26/09/2023	13/02/2024
XP S6	20/09/2023	13/02/2024
XP S7	<i>Airport Terminal Shaft</i>	
XP S8	02/11/2023	19/03/2024
XP S9	10/11/2023	19/03/2024
XP S10	29/11/2023	16/04/2024
XP S11	07/12/2023	16/04/2024
XP S12	08/01/2024	10/05/2024
XP S13	15/01/2024	10/05/2024
XP S14	09/02/2024	04/06/2024
XP S15	12/02/2024	04/06/2024
XP S16	<i>Bringelly Service Facility</i>	
XP S17	07/03/2024	03/07/2024
XP S18	08/03/2024	09/08/2024
XP S19	08/04/2024	30/07/2024
XP S20	11/04/2024	04/09/2024
XP S21	07/05/2024	26/08/2024
XP S22	27/05/2024	01/10/2024
XP S23	31/05/2024	20/09/2024

6.2 Groundwater level monitoring

Groundwater levels during construction will be monitored predominantly through VWP's as listed in Table 5-2, with the methodology and data reporting detailed in Section 7-2. VWP locations included in the construction monitoring program are shown on Figures C1 – C7, Annexure A.

Levels in groundwater monitoring bores will also be measured prior to water quality sampling (six monthly, refer Section 6.3) or monthly gauging and downloading of loggers to assess GDEs and salinity (Section 6.4)

Note that due to access issues, groundwater levels during construction of XPS18 to XPS22 will be monitored using a combination of existing monitoring wells within 250m of cross passages, and monitoring well SBT-GW-4008 on Badgerys Creek Road. Monitoring will be supported by modelling to assess the likely influence of construction drawdown, and comparison to similar



lithologies elsewhere along the alignment where the effects of cross passage construction can be measured close to the construction area.

The adequacy of the monitoring network will also be reviewed and revised (as required) if the modelled extent of drawdown is significantly changed due to the design changes.

6.2.1 Groundwater level - performance criteria

For the purpose of managing potential impacts associated with drawdown propagation during construction, trigger levels have been developed based on the modelled response (Table 6-4).

The project groundwater model has been used to define the trigger levels during construction, with actual groundwater level responses to be assessed against the predicted water levels, and trigger values assessed / revised where required.

Early observation of groundwater level response to construction is important in understanding and predicting the longer-term response, and these trigger levels may be refined as construction progresses and the groundwater response to excavation is better understood.

A traffic light system will be adopted based on baseline groundwater conditions and anticipated groundwater level drawdown from the works, with the Table 6-3 summarising proposed actions when the specific trigger level is activated.

Table 6-3: Traffic light trigger level system

Trigger level	Action
Green	Groundwater levels observed are within the target / green trigger level range and require no additional action.
Amber	<ul style="list-style-type: none"> Investigation to the possible reason for the drawdown or drawdown trend. Possible increase in monitoring frequency to confirm trend. Checks on instrumentation / monitoring equipment. Consideration for need of application of mitigation (i.e. targeted recharge) where drawdown is not found to be a seasonal variation, and is identified to be due to Project activities.
Red	<ul style="list-style-type: none"> Investigation to the possible reason for the drawdown or drawdown trend. Increase in monitoring frequency to confirm trend. Changes to groundwater level management where trend is deemed to be a function of the Project activities. May include implementation of localised recharge or other hydraulic control.



Table 6-4: Groundwater trigger levels and limits

Area	Location ID	Monitoring bore screen or VWP sensor elevation (m AHD)	Pre-development groundwater level range (mAHD)	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling		
				Green Trigger Level (m AHD)	Amber Trigger Level (m AHD)	Red Trigger Level (m AHD)
St Marys	SWD-TU100-17275-VWP01-A	15.15	42 to 43.3	35.0	34.5	34.0
St Marys	SWD-TU100-17275-VWP01-B	20.15	42 to 43.3	35.0	34.5	34.0
St Marys	SWD-TU100-17351-VWP02	14.72	28.2 to 31.6	Note 1		
St Marys	SWD-TU100-17443-VWP03-A	13.56	26.6 to 32.8	19.9	19.4	18.9
St Marys	SWD-TU100-17443-VWP03-B	18.56	28 to 34	21.3	20.8	20.3
St Marys	SWD-TU100-17720-VWP04	13.41	31.7 to 32	Note 1		
TBM Tunnel - South Creek	SMGW-BH-A105S	14.6 to 20.6	19 to 19.8	18.9	18.4	17.9
TBM Tunnel - South Creek	SMGW-BH-A107	-4.44 to 3.46	20.9 to 21.6	20.8	20.3	19.8
TBM Tunnel - South Creek	SBT-GW-1804	16.0 to 19.0	18.7 to 19	18.5	18.0	17.5
Claremont Meadows SF	SBT-GW-1805	18.3 to 24.3	24.7 to 25.6	22.0	21.5	21.0
Claremont Meadows	SWD-TU100-19992-VWP06-01	5.998	20.2 to 25	Note 1		
Claremont Meadows	SWD-TU100-19992-VWP06-02	11	20.2 to 25	Note 1		
Claremont Meadows	SWD-TU100-19992-VWP06-03	17.5	20.6 to 25	Note 1		
Claremont Meadows	SWD-TU100-20071-VWP07-A	2.813	26.9 to 27	25.4	24.9	24.4
Claremont Meadows	SWD-TU100-20071-VWP07-B	7.813	27.1 to 27.3	25.6	25.1	24.6
Claremont Meadows	SBT-GW-1028	22.5 to 27.5	26.7 to 26.5	25.2	24.7	24.2
Orchard Hills	SWD-TU150-21965-VWP01-A	16.6	37.8 to 38.5	36.0	35.5	35.0
Orchard Hills	SWD-TU150-21965-VWP01-B	21.6	36.8 to 37.5	35.0	34.5	34.0
Orchard Hills	SWD-TU150-22010-VWP02	22.81	33.8 to 35.3	31.5	31.0	30.5
Orchard Hills	SWD-TU150-22115-VWP03	23.58	35.2 to 37.6	Note 1		
Orchard Hills	SWD-TU150-22120-VWP04	21.9	35.5 to 35.6 ^{Note 2}	31.5	31	30.5
Orchard Hills	SBT-GW-1042	32.1 to 38.1	37.7 to 37.8	33.5	33.0	32.5



Area	Location ID	Monitoring bore screen or VWP sensor elevation (m AHD)	Pre-development groundwater level range (mAHD)	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling		
				Green Trigger Level (m AHD)	Amber Trigger Level (m AHD)	Red Trigger Level (m AHD)
Orchard Hills	SWD-TU150-22193-VWP05-A	20.499	33.7 to 34.9	Note 1		
Orchard Hills	SWD-TU150-22193-VWP05-B	25.499	34.5 to 35.7	Note 1		
Orchard Hills	SWD-TU150-22205-VWP06	24.28	32.5 to 35	Note 1		
Orchard Hills	SWD-TU150-22333-VWP07	24.795	35.5 to 37.3	Note 1		
Orchard Hills	SMGW-BH-A315	32.3 to 38.3	38.8 to 40	37.4	36.9	36.4
Orchard Hills	SBT-GW-1063	20.6 to 29.6	25.4 to 25.7	24.8	24.3	23.8
Airport Portal	SWD-TU300-33565-VWP02	52.466	55.2 to 64	50.3	49.8	49.3
Airport Terminal	ABP-TD300-VWP03	56.296	60 to 62.2	Note 1		
Airport Terminal	ABP-TD300-VWP02	56.277	59.8 to 61.7	Note 1		
Airport Terminal	ABP-TD300-VWP01	55.1	59.3 to 62.9	Note 1		
Airport Terminal	ABP-TD300-VWP04	55.123	60.5 to 62.7	Note 1		
Airport Portal	SWD-TU300-33586-VWP01	50.723	60.3 to 63.9	54.8	54.3	53.8
Portal / Cross passage XPS01	SBT-GW-3003-A	62.7 to 65.7	63.7 to 63.9	60.0	59.5	59.0
Portal / Cross passage XPS01	SBT-GW-3003-B	54.4 to 57.4	55 to 63	51.3	50.8	50.3
Portal / Cross passage XPS01	SBT-GW-3003-C	45.3 to 48.3	59.4 to 59.6	55.7	55.2	54.7
Airport Terminal	SBT-GW-3006	49.3 to 55.3	72.9 to 74.6	65.0	64.5	64.0
Airport Terminal	ATL-SN350-VWP01-01	60	69.2 to 75	56.9	56.4	55.9
Airport Terminal	ATL-SN350-VWP01-02	64	69.1 to 75.1	56.8	56.3	55.8
Airport Terminal	ATL-SN350-VWP01-03	67.999	69.1 to 75.1	56.8	56.3	55.8
Airport Terminal	ATL-SN350-VWP01-04	72.998	73 to 74.1	60.7	60.2	59.7
Airport Terminal	SWD-TU300-34874-VWP03-01	60	74.2 to 74.6	Note 1		
Airport Terminal	SWD-TU300-34874-VWP03-02	64	74.2 to 74.6	Note 1		
Airport Terminal	SWD-TU300-34874-VWP03-03	68	74.4 to 74.6	Note 1		



Area	Location ID	Monitoring bore screen or VWP sensor elevation (m AHD)	Pre-development groundwater level range (mAHD)	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling		
				Green Trigger Level (m AHD)	Amber Trigger Level (m AHD)	Red Trigger Level (m AHD)
Airport Terminal	SWD-TU300-34874-VWP03-04	73	74.8 to 75.2	Note 1		
Airport Terminal	SWD-TU300-34893-VWP04-04	73	74 to 74.7	62.6	62.1	61.6
Airport Terminal	SWD-TU300-34893-VWP04-01	60	72.7 to 73.7	61.3	60.8	60.3
Airport Terminal	SWD-TU300-34893-VWP04-02	64	72.7 to 73.7	61.3	60.8	60.3
Airport Terminal	SWD-TU300-34893-VWP04-03	68	73 to 73.8	61.6	61.1	60.6
Airport Terminal Temp Shaft	SWD-TU351-35209-VWP01	58.1	77 to 78.1	Note 1		
Airport Terminal Temp Shaft	SWD-TU351-35240-VWP02	57.8	77.1 to 77.8	Note 1		
Western Sydney Airport	SBT-GW-4000	59.2 to 69.7	70.5 to 70.9	70.5	70.0	69.5
Bringelly SF	SWD-TU351-37371-VWP04	50.313	62.5 to 67.1	50.6	50.1	49.6
Bringelly SF	SWD-TU351-37377-VWP05	52.53	64.5 to 67.2	56.0	55.5	55.0
Bringelly SF	SWD-TU351-37471-VWP06	52.516	67.6 to 68	62.5	62.0	61.5
Aerotropolis	SBT-GW-4008	50.3 to 56.3	72 to 72.2	71.8	71.3	70.8
Aerotropolis	SBT-GW-4010	62 to 68	73.3 to 73.8	73.0	72.5	72.0
Aerotropolis	SWD-TU400-39287-VWP01	57.506	67 to 67.6	60.3	59.8	59.3
Aerotropolis	SWD-TU400-39340-VWP02	55.831	65.6 to 66.8	55.6	55.1	54.6
Aerotropolis	SWD-TU400-39532-VWP03	55.167	67.4 to 71.2	59.0	58.5	58.0
Aerotropolis	SWD-TU400-39565-VWP04-A	47.749	66.2 to 68	59.3	58.8	58.3
Aerotropolis	SWD-TU400-39565-VWP04-B	50.749	66.8 to 68.6	59.9	59.4	58.9
Aerotropolis	SWD-TU400-39606-VWP05	44.535	66 to 66.1	57.7	57.2	56.7
Aerotropolis	SBT-GW-4021	51.9 to 60.9	59.8 to 59.9	59.6	59.6	58.6

Notes: (1) Purpose of monitoring asset is wall design where drawdown is not the critical design case.

(2) Limited baseline data available



6.3 Groundwater quality monitoring

6.3.1 St Marys – Mitigation system monitoring

Significant chlorinated hydrocarbon contamination in groundwater has been identified beneath the former dry cleaner at 1-7 Queen St. This contamination has been investigated and management measures implemented to mitigate potential construction related risks and adverse changes in risk profile due to station excavation related drawdown associated with this impact.

Mitigation, management and construction monitoring measures are detailed in:

- *St Marys Station - Remedial Action Plan* (Tetra Tech Major Projects, 2023, SMWSASBT-CPG-SWD-SW000-GE-RPT-040521)
- *St Marys Station – Implementation of Permeable Reactive Barrier* (Tetra Tech Major Projects, 2023, SMWSASBT-CPG-SWD-SW000-GE-RPT-040561.
- Off-Airport Sydney Metro Western Sydney Airport Construction Soil and Water Management Plan.

In summary, a permeable reactive barrier (PRB) has been installed to mitigate the potential risk of construction related drawdown mobilising chlorinated hydrocarbon impact in groundwater to the west of St Marys Station.

Given the potential for unacceptable inhalation or direct contact risk, a targeted multi-level groundwater monitoring and mitigation approach has been applied, to allow for contingency mitigation to be implemented if required before an unacceptable exposure occurs.

Weekly monitoring of groundwater between the source area and the PRB, and between the PRB and station box commenced on 30 June 2023, and will continue until the station excavation is handed to SSTOM.

The mitigation monitoring program summarised in Table 6-5 will monitor the effectiveness of the PRB, and identify if an adverse change in risk profile. Where contamination is detected concentrations will be compared to predictions and risk-based trigger values (Table 6-5).

Table 6-5: Mitigation groundwater monitoring – St Marys

Monitoring Well	Monitoring frequency	Analytes	Trigger Value and Contingency Plan
SBT-GW-0001 SBT-GW-0001b	Weekly	Volatile chlorinated hydro- carbons	Trigger Values: PCE 0.3mg/L TCE 0.055mg/L cis 1,2 DCE 0.25mg/L VC 0.2mg/L Refer HHRA for determination of trigger values Contingency Plan: Refer to Section 11.6 of the RAP
SBT-GW-1012 ¹ SBT-GW-1013 ¹ SBT-GW-1014 ¹	Weekly		
SBT-GW-1347a ² SBT-GW-1347b ² SBT-GW-1347c ² SBT-GW-1348a ² SBT-GW-1348b ² SBT-GW-1348c ²	Weekly for 'c' interval wells (at ~18mAHD) <i>If contingency mitigation implemented, then all multi- level wells monitored weekly</i>		

Notes:

1. SBT-GW-1012, SBT-GW-1013 and SBT-GW-1014 are screened from the pre-construction water table to 20mAHD with a saturated interval of 12m, although this is expected to decrease to 7m during construction. These wells monitor the effectiveness of the primary PRB, with hydrasleeves placed at 30mAHD, 27mAHD, 24mAHD and 21mAHD.

2. SBT-GW-1347a, SBT-GW-1347b, SBT-GW-1347c, SBT-GW-1348a, SBT-GW-1348b, SBT-GW-1348c are multi-level groundwater wells, with details provided in Table 3.



Time and concentration-based trigger levels for sentinel and mitigation monitoring wells between the source area and the Station box will be used to identify unacceptable contaminant concentrations during construction.

Where detectable concentrations of chlorinated ethenes are reported in monitoring wells between the station and the PRB, model predictions as outlined in the Human Health Risk Assessment (HHRA, SMWSASBT-CPG-SWD-SW000-GE-RPT-040540) will be reviewed to assess whether concentrations exceeding the trigger values are likely to reach the excavation before it is sealed.

Contingency mitigation measures are detailed in Section 11.6 of the RAP should a potential adverse change in risk be identified.

6.3.2 Alignment wide groundwater quality monitoring

Groundwater quality monitoring during construction will be undertaken using a combination of pre- and post-award groundwater monitoring bores. The construction monitoring program has been reviewed and refined following completion of the baseline assessment.

The frequency of water quality monitoring along the alignment is six monthly, and monthly prior to, during and after cross passage construction.

The analytical suites for construction monitoring for groundwater quality are provided in Table 6-6

Table 6-6: Construction Monitoring – Analytical Suites

Program	Analysis suites
Construction Monitoring - Base Analytical Suite	General indicators (pH, EC, TDS)
	TOC
	Major cations (calcium, magnesium, sodium, potassium)
	Major anions (chloride, sulphate) and speciated alkalinity (bicarbonate, carbonate, hydroxide)
	Dissolved metals (aluminium, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, zinc) and total metals (aluminium, cobalt, iron, manganese)
	Nutrients (ammonia, nitrate, nitrite, total kjeldahl nitrogen, total nitrogen, total phosphorous, reactive phosphorous)
Additional analytes – included for select wells where compounds were detected and/or exceeded adopted criteria in the Baseline Assessment	Total Recoverable Hydrocarbons (TRH)
	Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN)
	Volatile Organic Compounds (VOCs)
	Phenols
	Per- and Polyfluoroalkyl Substances (PFAS) (short suite)

The revised construction groundwater monitoring program is provided in Table 6-7, with well details; co-ordinates, screen intervals and rationale for inclusion, provided in Table A1, Annexure D. Bore locations for construction water quality monitoring are shown on Figures 6.1 to 6.4.



Table 6-7: Construction water quality monitoring Wells – frequency, water quality analysis and level/EC monitoring

Location ID ¹	Monitoring Zone	Aquifer	TOC mAHD	Water quality sampling frequency	Base analytical Suite	Additional analytes
MW1	St Marys	Residual	NK	Six Monthly	✓	VOCs, PFAS
SBT-GW-0001	St Marys	Unknown	35.2	Weekly ²	-	VOCs
SBT-GW-1001	St Marys	Residual/ Bedrock	48.8	Six Monthly	✓	
SBT-GW-1002	St Marys	Residual/ Bedrock	42.6	Six Monthly	✓	
SBT-GW-1005	St Marys	Residual/ Bedrock	44.2	Six Monthly		
SBT-GW-1012	St Marys	Residual/ Bedrock	35.4	Weekly - multiple depths ²	-	VOCs
SBT-GW-1013	St Marys	Residual/ Bedrock	35.4	Weekly - multiple depths ²	✓	VOCs
SBT-GW-1014	St Marys	Residual/ Bedrock	35.5	Weekly - multiple depths ²	-	VOCs
SBT-GW-1016	St Marys	Residual/ Bedrock	36.1	Six Monthly	✓	TPH/BTEXN, PFAS
SBT-GW-1017	St Marys	Residual/ Bedrock	32.5	Six Monthly	✓	TPH/BTEXN, PFAS
SBT-GW-1019R	St Marys	Bedrock	35.2	Six Monthly	✓	VOCs, PFAS
SBT-GW-1021	St Marys	Residual/ Bedrock	33.9	Six Monthly		
SBT-GW-1022	St Marys	Bedrock	34.3	As required ³	✓	VOCs, PFAS
SBT-GW-1803	St Marys	Bedrock	47.6	Six Monthly	✓	
SBT-GW-1347A	St Marys	Bedrock	35.7	- (contingency)		
SBT-GW-1347B	St Marys	Bedrock	35.7	- (contingency)		
SBT-GW-1347C	St Marys	Bedrock	35.7	Weekly ²	-	VOCs
SBT-GW-1348A	St Marys	Bedrock	35.8	- (contingency)		
SBT-GW-1348B	St Marys	Bedrock	35.8	- (contingency)		
SBT-GW-1348C	St Marys	Bedrock	35.8	Weekly ²	-	VOCs
SMGW-BH-A401	St Marys	Residual/Bedrock	36.5	Six Monthly	✓	TPH/BTEXN, PFAS
SMGW-GW02	St Marys	Residual	35.4	Six monthly	-	VOC, PFAS
SBT-GW-1804	TBM Tunnel - South Creek	Residual	21	As required ³	✓	



Location ID ¹	Monitoring Zone	Aquifer	TOC mAHD	Water quality sampling frequency	Base analytical Suite	Additional analytes
SMGW-BH-A107	TBM Tunnel - South Creek	Bedrock	22.5	As required ³	✓	
SBT-GW-1030	Cross passage / Tunnel (XPN13)	Residual/Bedrock	36.8	As required ³	✓	PFAS
SBT-GW-1031	Cross passage / Tunnel (XPN14)	Bedrock	40.8	As required ³	✓	
SBT-GW-1024	Claremont Meadows SF	Alluvium/Bedrock	28.5	Six Monthly	✓	TPH/BTEXN, PFAS
SBT-GW-1805	Claremont Meadows SF	Residual	27.3	Six Monthly	✓	
SBT-GW-1806	Orchard Hills	Bedrock	43	Six Monthly	✓	TPH/BTEXN
SBT-GW-1807	Orchard Hills	Bedrock	37.5	Six Monthly	✓	
SBT-GW-1808	Orchard Hills	Residual	37.5	Six Monthly	✓	
SMGW-BH-A315	Orchard Hills	Residual/Bedrock	42.3	Six Monthly	✓	TPH/BTEXN, PFAS
SBT-GW-1042	Orchard Hills	Alluvium	40.1	Six Monthly	✓	
SBT-GW-1048	Orchard Hills	Alluvium/Bedrock	39.6	Six Monthly	✓	
SBT-GW-3003-A	Portal / Cross passage XPS01	Bedrock	67.7	Six Monthly	✓	
SBT-GW-3003-B	Portal / Cross passage XPS01	Bedrock	67.4	Six Monthly	✓	
SBT-GW-3003-C	Portal / Cross passage XPS01	Bedrock	67.3	Six Monthly	✓	
SBT-GW-3006	Airport Terminal	Bedrock	84.3	Six monthly	✓	
SBT-GW-3012-A	Airport Terminal	Bedrock	84	Six Monthly	✓	
SBT-GW-3012-B	Airport Terminal	Bedrock	83.9	Six Monthly	✓	TPH
SBT-GW-3012-C	Airport Terminal	Bedrock	83.8	Six Monthly	✓	
SBT-GW-3022	Airport Terminal	Bedrock	77.8	Six Monthly	✓	TPH
SBT-GW-4000	Western Sydney Airport	Bedrock	72.2	As required ³	✓	TPH/BTEXN
SMGW-BH-C320	Western Sydney Airport	Residual/Bedrock	66.5	Six Monthly	✓	TPH/BTEXN, PFAS
SMGW-BH-C321	Western Sydney Airport	Residual/Bedrock	63.5	Six Monthly	✓	
SMGW-BH-C330	Western Sydney Airport	Bedrock	69.4	Six Monthly	✓	
SBT-GW-4003	Bringelly SF	Residual/Bedrock	71.9	Six Monthly	✓	TPH/BTEXN, PFAS



Location ID ¹	Monitoring Zone	Aquifer	TOC mAHD	Water quality sampling frequency	Base analytical Suite	Additional analytes
SBT-GW-4005	Bringelly SF	Bedrock	73.6	Six Monthly	✓	
SBT-GW-4800	Bringelly SF	Residual/ Bedrock	71.432	Six Monthly	✓	
SBT-GW-4801	Bringelly SF	Residual/ Bedrock	71.372	Six Monthly	✓	
SBT-GW-4802	Bringelly SF	Bedrock	74.348	Six Monthly	✓	
SBT-GW-4008	Aerotropolis	Bedrock	78.3	As required ³	✓	
SBT-GW-4010	Aerotropolis	Bedrock	78.8	As required ³	✓	
SBT-GW-4014	Aerotropolis	Residual/Bedrock	73.9	Six Monthly	✓	PFAS
SBT-GW-4017	Aerotropolis	Residual	71.3	Six Monthly	✓	TPH/BTEXN, PFAS
SBT-GW-4021	Aerotropolis	Alluvium/Bedrock	62.8	Six Monthly	✓	
SBT-GW-4803	Aerotropolis	Bedrock	72.7	Six Monthly	✓	

Note: *Italic* denotes bore detail unknown as not installed by CPBG

1. Alternate well IDs listed in Table 5-1
2. Refer St Marys Station Remediation Action Plan
3. Monthly sampling during cross passage construction – refer Table 6.2 for monitoring period



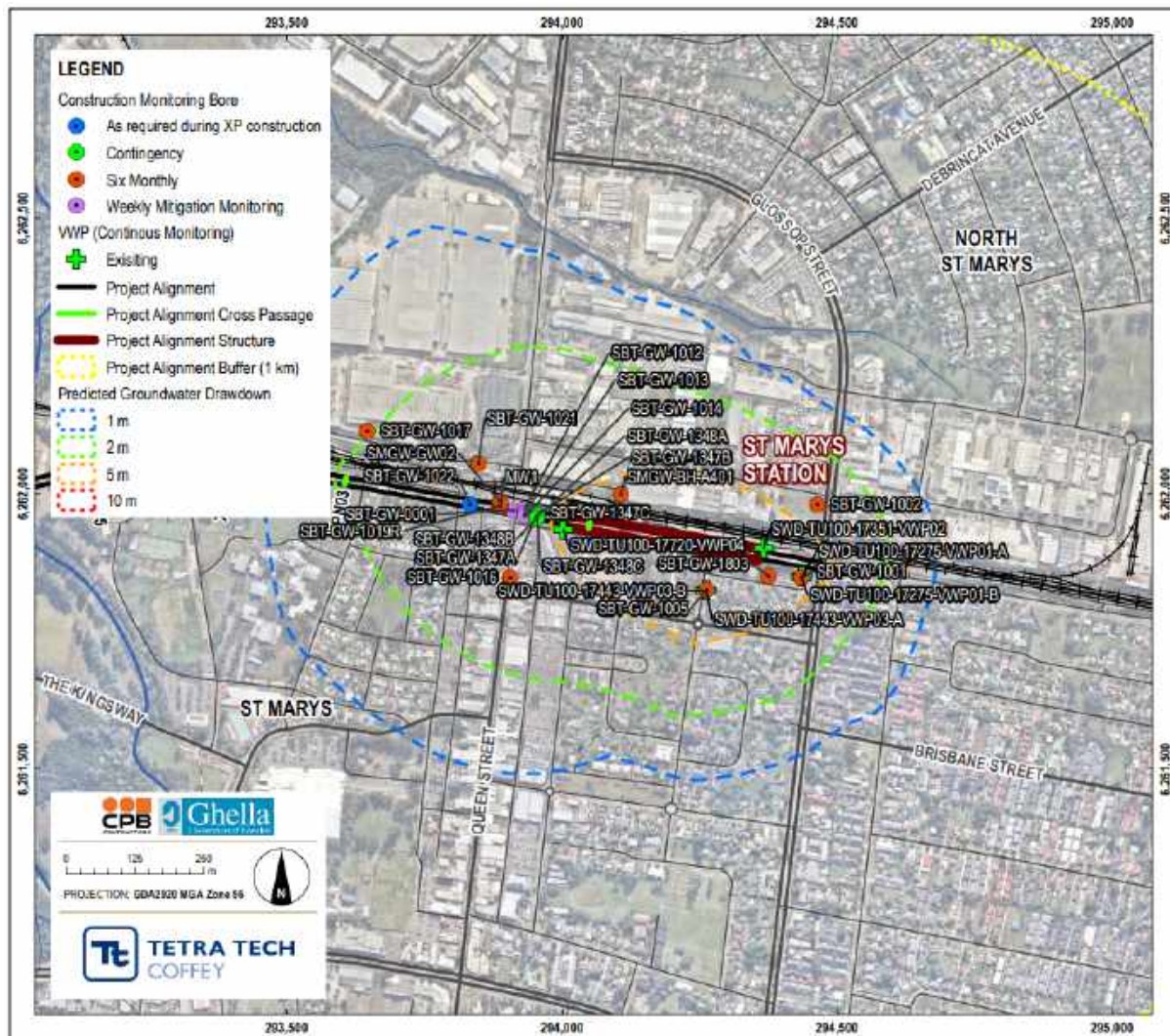


Figure 6-1: Construction groundwater monitoring program – St Marys Station



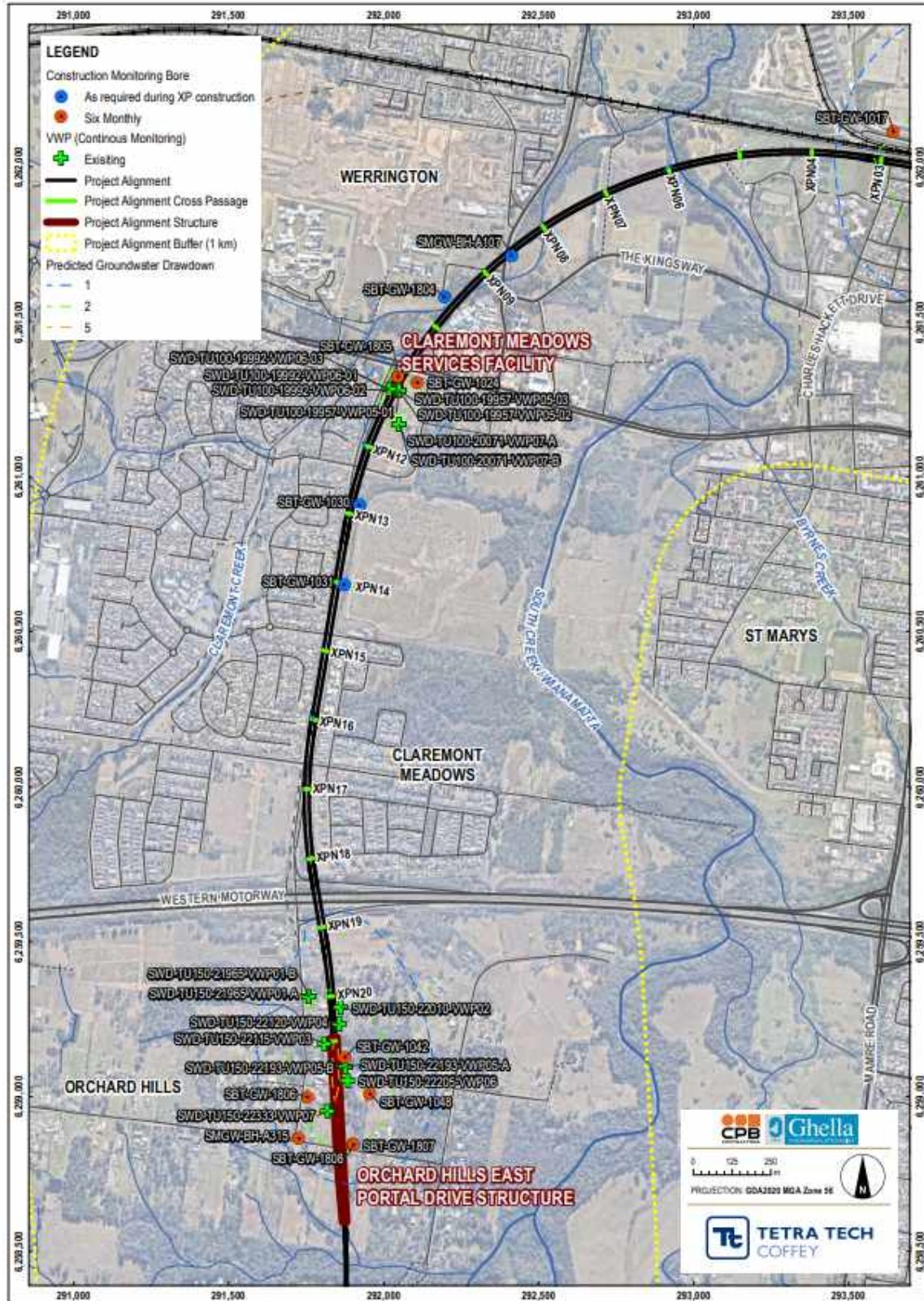


Figure 6-2: Construction groundwater monitoring program – South Creek to Orchard Hills Station



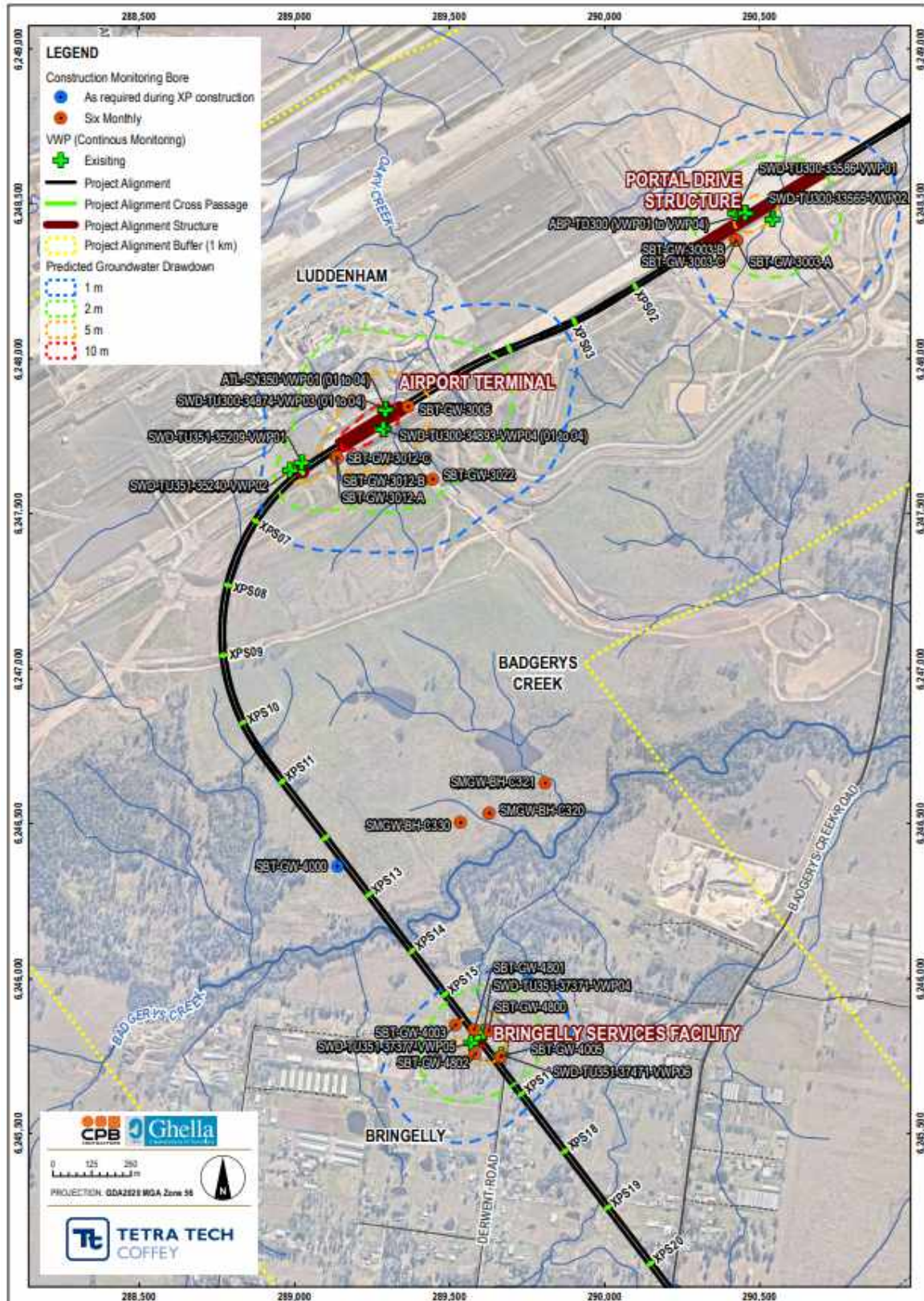


Figure 6-3: Construction groundwater monitoring program – WSI and Bringelly Services Facility



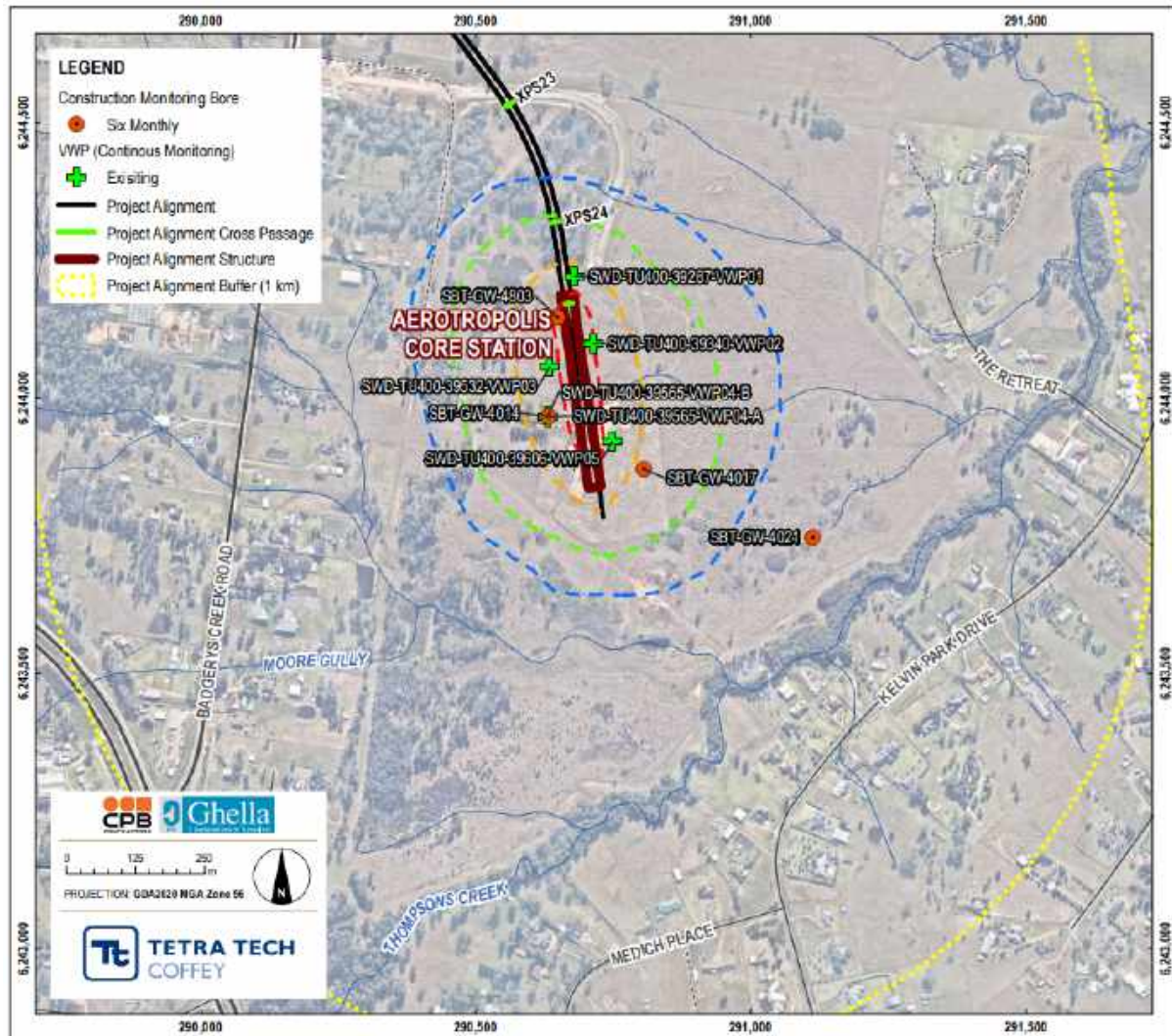


Figure 6-4: Construction groundwater monitoring program – Aerotropolis Core Station



The frequency of sampling and analysis required has been reviewed based on data from the baseline assessment (Section 5-2 and Annexure F). Six monthly groundwater sampling events for the construction monitoring bore network is considered sufficient as the timing for changes in water quality is expected to be greater than six months, and no contamination requiring active management has been identified with the exception of the former dry cleaner at 1-7 Queen St (refer Section 6.3.1).

The groundwater monitoring network and program will be refined during construction based on the observed groundwater responses to construction activities and ongoing development and recalibration of the groundwater model.

The construction groundwater monitoring program is considered to be suitable for identification of potential groundwater quality issues as bores have been targeted along the alignment where model predicted drawdown has been identified.

6.3.3 Groundwater quality performance criteria

The baseline data indicates that some groundwater quality parameters exceed initial screening criteria based on:

- ANZECC/ARMCANZ 2000 relevant physical and chemical stressors
- ANZG (2018) 95% species protection criteria for freshwater water, with criteria for toxicants known to bioaccumulate assessed based on the 99% species protection criteria
- PFAS National Environmental Management Plan (NEMP 2.0) 99% species protection values
- Australian Standard AS2159 – 2009 Piling design and installation have also been considered to assess potential groundwater aggressivity risks posed by groundwater to underground concrete and steel structures (discussed in Section 21.2 of the HIR).
- Discharge concentration limits negotiated with EPA as detailed in L2.4 of Environmental Licence (EPL 21672, amended 9 February 2023)
- Airports (Environment Protection) Regulations (AEPR) 1997 guidelines (on-airport locations only).

Site-specific groundwater quality action triggers have been developed for select locations where baseline assessment identified groundwater contamination may be within the area predicted to be influenced by construction related drawdown, and either:

- Above detect for TPH or PFAS, or
- 10 x EPL for COPCs which typically exceed the EPL along the alignment (i.e aluminium, cadmium, copper, zinc, total nitrogen and total phosphorus)

Site specific triggers are based on detection of COPC concentration above the baseline maximum, with metal action triggers relating to filtered metal concentrations.

This approach acknowledges that existing groundwater conditions exceed of EPL limits for a number of parameters in groundwater along the alignment. Any adverse change in risk will therefore likely to be due to where high concentrations already exist, and have been reported in the baseline assessment, with the intent of the triggers to identify where conditions have changed.

For sentinel wells, and for COPCs where baseline concentrations are less than 10 x the EPL limits, but exceed the initial screening criteria, a potential adverse change in conditions will be identified by statistical trend assessment (Mann Kendall Statistic), rather than via well and analyte specific action triggers. As trend analysis requires a minimum of four values, and many construction sampling locations have three or less baseline values, the trend analysis will be undertaken using the two most recent values from the baseline assessment, and construction monitoring phase data.

Where a statistically increasing trend is reported, the baseline data range will be reviewed, and a trigger reported if the construction monitoring concentration is greater than 250% of the maximum historical concentration.



Where a trigger is exceeded, or a statistically increasing trend is identified for a CoPC and concentrations exceed the initial screening criteria, then an investigation will be carried out which may include:

- Further monitoring to confirm groundwater conditions (increased frequency).
- Assessment to identify if the exceedance represents an adverse change in risk profile and a remedial response is required (refer to Section 7.9.1 of the SWMP), or if the Action Trigger should be revised or implemented in a sentinel well or for the COPC triggered.

Where trigger exceedances were identified, and concentrations are outside the background range for groundwater along the alignment, the monitoring program will also be reviewed as outlined in Section 9.

This approach to site specific groundwater quality action triggers has been developed by consultants certified under the Environment Institute of Australia and New Zealand’s Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)).

The action triggers not intended for use as discharge criteria, or to assess potential risk to ecological receptors.

With the exception of groundwater associated with the former dry cleaner at St Marys, no existing potential vapour intrusion risks have been identified based on baseline data collected, and therefore no SSTVs for VOCs have been developed.

Site specific trigger levels for water quality are provided in Table 6.8.



Table 6-8: Groundwater quality action triggers

Location ID ¹	Monitoring Zone	Aluminium	Cadmium	Copper	Zinc	pH	Total N	Total P	Total PFAS	TRH/BTEXN	Other	Trends only
MW1	St Marys								PFOS >1.07ug/L		cis 1,2 DCE >4.7mg/L PCE >0.98mg/L VC > 0.32mg/L	
SBT-GW-0001 *	St Marys											✓
SBT-GW-1001	St Marys	>14.7mg/L		>81ug/L	>1,750ug/L	<4.5						
SBT-GW-1002	St Marys	>2.1mg/L		>29ug/L	>172ug/L	<4.0						
SBT-GW-1005	St Marys											✓
SBT-GW-1012*	St Marys											✓
SBT-GW-1013*	St Marys											✓
SBT-GW-1014*	St Marys											✓
SBT-GW-1016	St Marys				>236ug/L		>29.8mg/L	>10.1mg/L	>0.032ug/L	BTEXN >9ug/L		
SBT-GW-1017	St Marys						>47.4mg/L	>33.2mg/L	>0.0102ug/L	TPH >C10 >500ug/L		
SBT-GW-1019R	St Marys						>13mg/L	>5.6mg/L	>0.0066ug/L		PCE >203ug/L	
SBT-GW-1021	St Marys										Phenol >31ug/L	
SBT-GW-1022	St Marys											✓
SBT-GW-1803	St Marys											✓
SBT-GW-1347C*	St Marys											✓
SBT-GW-1348C*	St Marys											✓
SMGW-BH-A401	St Marys	>3mg/L		>3,240ug/L	>235ug/L	pH <4.6		>2.5mg/L	>0.021ug/L			
SMGW-GW02	St Marys								>0.2ug/L		PCE >1,900ug/L cis1,2 DCE >17ug/L	
SBT-GW-1804	TBM Tunnel - South Creek											✓
SMGW-BH-A107	TBM Tunnel - South Creek											✓



Location ID ¹	Monitoring Zone	Aluminium	Cadmium	Copper	Zinc	pH	Total N	Total P	Total PFAS	TRH/BTEXN	Other	Trends only
SBT-GW-1030	Cross passage / Tunnel (XPN13)	>7.5mg/L		>26ug/L	>542ug/L	pH <4.4			>0.13ug/L			
SBT-GW-1031	Cross passage / Tunnel (XPN14)											✓
SBT-GW-1024	Claremont Meadows SF								>0.09ug/L	TPH C6-C9 > 2,100ug/L		
SBT-GW-1805	Claremont Meadows SF							>6.6mg/L	>19.9mg/L			
SBT-GW-1806	Orchard Hills		>8.1ug/L	47ug/L		pH (11-11.2)				BTEXN >4ug/L		
SBT-GW-1807	Orchard Hills											✓
SBT-GW-1808	Orchard Hills	>2,260ug/L		>79ug/L	>478ug/L	pH <3.65						
SMGW-BH-A315	Orchard Hills				>240ug/L				>0.034ug/L	TPH >C10 > 260ug/L		
SBT-GW-1042	Orchard Hills	>1,900ug/L			>2,182ug/L	pH < 5	183mg/L					
SBT-GW-1048	Orchard Hills		>2.7ug/L		>833ug/L							
SBT-GW-3003-A	Portal / Cross passage XPS01											✓
SBT-GW-3003-B	Portal / Cross passage XPS01											✓
SBT-GW-3003-C	Portal / Cross passage XPS01											✓
SBT-GW-3006	Airport Terminal											✓
SBT-GW-3012-A	Airport Terminal											✓
SBT-GW-3012-B	Airport Terminal											✓
SBT-GW-3012-C	Airport Terminal											✓
SBT-GW-3022	Airport Terminal									TPH >C10 >3,300ug/L		
SBT-GW-4000	Western Sydney Airport							>5.4mg/L		TPH >C10 >1,620ug/L Toluene > 46ug/L		
SMGW-BH-C320	Western Sydney Airport								> 0.5ug/L	Toluene > 34ug/L		



Location ID ¹	Monitoring Zone	Aluminium	Cadmium	Copper	Zinc	pH	Total N	Total P	Total PFAS	TRH/BTEXN	Other	Trends only
SMGW-BH-C321	Western Sydney Airport								> 0.046ug/L			
SMGW-BH-C330	Western Sydney Airport	>5,310ug/L			>1,090ug/L	pH <4.9						
SBT-GW-4003	Bringelly SF									TPH C6-C9 > 20ug/L		
SBT-GW-4005	Bringelly SF								>0.01ug/L			
SBT-GW-4800	Bringelly SF							2.2mg/L				
SBT-GW-4801	Bringelly SF											✓
SBT-GW-4802	Bringelly SF											✓
SBT-GW-4008	Aerotropolis											✓
SBT-GW-4010	Aerotropolis											✓
SBT-GW-4014	Aerotropolis								>0.002ug/L			
SBT-GW-4017	Aerotropolis								>0.0145ug/L	TPH >C10 >880ug/L TPH C6-C9 > 40ug/L		
SBT-GW-4021	Aerotropolis						28.3mg/L	>16.2mg/L				
SBT-GW-4803	Aerotropolis											✓



6.4 GDE and Salinity monitoring

Risk posed to GDE health by altered groundwater quality is currently considered negligible, and the implementation of the construction groundwater quality monitoring program (outlined in Sections 5.3 and 6.3) is considered sufficient for GDE monitoring for the SBT Works.

Level monitoring is the primary, leading indicator of potential impact to GDEs. Groundwater level and EC monitoring will be conducted in monitoring wells identified in Table 6.9, which includes proposed wells in the vicinity of GDEs to specifically monitor GDE conditions (Section 5.3).

Groundwater level and quality monitoring will be conducted using data loggers that can record EC, and groundwater level. The loggers will be installed at key monitoring bores between the alignment and GDEs (Table 6-9) and programmed to record data hourly.

Data loggers will be downloaded and locations manually gauged on a monthly basis, which is considered sufficient as the timing for changes in water level and quality with respect to GDEs is expected to be greater than one month. The monthly download and review of data will be supported by laboratory testing of water quality as outlined in Section 6.3.

All level / EC loggers will record on hourly intervals, which may be adjusted over consecutive monitoring events according to observed fluctuations or trends in groundwater conditions.



Table 6-9: Groundwater bores to be monitored for EC and level during construction

Location	Area	Easting MGA2020	Northing MGA2020	Target stratigraphic unit	Screen Interval (mBTC)	Monitoring	Status
SMGW-BH-A105S	Cross passage XP-N05	293100	6261999	Alluvium/Residual	2 - 8	Level / EC	Installed
SMGW-BH-A107	Cross passage XP-N09	292413	6261713	Bedrock	19 - 26	Level / EC	Installed
SBT-GW-1804	Cross passage XP-N10	292194.9	6261580.1	Residual	3 - 5	Level / EC	Location optimised to monitor effects of cross passage construction
SBT-GW-1805	Claremont Meadows	292046.7	6261326.1	Residual	3 - 9	Level / EC	Installed
SBT-GW-1028	Claremont Meadows	292050	6261168	Residual/Alluvium	3 - 6	Level / EC	Unable to access – asbestos exclusion zone
SBT-GW-1042	Orchard hills	291874.7	6259123.7	Alluvium	2 - 8	Level / EC	Installed
SBT-GW-1063	Orchard hills	292193.5	6258861.3	Alluvium/Bedrock	2 - 11	Level / EC	Installed
SMGW-BH-A315	Orchard hills	291726.6	6258863.8	Residual/Bedrock	4 - 10	Level / EC	Installed
SBT-GW-3006	Airport Terminal	289368	6247844.4	Bedrock	29 - 35	Level / EC	Installed
SBT-GW-3003-A	Airport Terminal	290425.6	6248380.7	Bedrock	2 - 5	Level / EC	Installed
SBT-GW-3003-B	Airport Terminal	290424.6	6248382.2	Bedrock	1 - 10	Level / EC	Installed
SBT-GW-3003-C	Airport Terminal	290423.4	6248384	Bedrock	19 - 22	Level / EC	Installed
SBT-GW-4000	Cross passage XP-S13	289140.5	6046360.3	Bedrock	2.5 - 13	Level / EC	Installed
SBT-GW-4010	Aerotropolis	290427.4	6244758.3	Bedrock	22 - 28	Level / EC	Installed
SBT-GW-4008	Aerotropolis	290230	6244991.9	Bedrock	22 - 28	Level / EC	Installed
SBT-GW-4021	Aerotropolis	291112.5	6243748	Alluvium/Bedrock	2 - 11	Level / EC	Installed



6.4.1 GDE monitoring performance criteria

Preliminary site specific trigger values (SSTVs) have been developed following completion of baseline groundwater level and quality monitoring (Table 6-10). The SSTVs may require revision in the next iteration of this document as limited EC data is available for some locations.

Table 6-10: Preliminary EC SSTVs for continuous EC monitoring of GDEs

Area	Bore ID	Screened unit	Installed screen depth (mbgl)	Baseline EC range (µS/cm)	Preliminary EC SSTV (µS/cm)
Claremont Meadows	SBT-GW-1805	Residual	3 - 9	2,480 – 3,100	3,650
Claremont Meadows	SBT-GW-1028	Residual	3 - 6	No sampling as in asbestos exclusion zone	
Orchard Hills	SBT-GW-1042	Alluvium	2 - 8	11,900 – 12,400	18,600
Orchard Hills	SBT-GW-1063	Alluvium/Bedrock	2 - 11	11,650 – 13,293	19,940
Orchard Hills	SMGW-BH-A315	Alluvium/Bedrock	4 - 10	1,842 – 2,878	4,317
Aerotropolis	SBT-GW-4021	Alluvium/Bedrock	2 - 11	21,400 – 22,000	33,000

SSTVs were also developed for level decline at each GDE based on their obligate or facultative dependence. Groundwater level related SSTVs are provided in Table 6-11.

Table 6-11: Preliminary Level SSTVs for continuous level monitoring of GDEs

Area	Bore ID	Screened unit	Installed screen/sensor depth (mbgl)	Baseline level range (mAHD)	Preliminary Level SSTV (mAHD) *
Claremont Meadows	SBT-GW-1805	Residual	3 - 9	24.7 to 25.6	21.5
Claremont Meadows	SBT-GW-1028	Residual	3 - 6	26.5 – 26.7	24.7
Orchard Hills	SBT-GW-1042	Alluvium	2 - 8	37.7 – 37.8	33.0
Orchard Hills	SWD-TU150-22010-VWP02	Bedrock	16 (VWP)	33.8 – 35.3	31.0
Orchard Hills	SBT-GW-1063	Alluvium/Bedrock	2 - 11	25.4 - 25.7	24.3
Orchard Hills	SMGW-BH-A315	Alluvium/Bedrock	4 - 10	38.8 - 40	36.9
Aerotropolis	SBT-GW-4021	Alluvium/Bedrock	2 - 11	59.8 - 59.9	59.1

* Based on Amber Trigger Level as presented in Table 6-4

Data from the monthly downloads will continue to be assessed against the SSTVs to identify where conditions are not as expected or predicted (discussed further below). Data analysis and groundwater monitoring reports will be produced every 6 months (consistent with Section 8.5 of this document). A review of the monitoring program after the first 6 months of construction will be completed to determine the efficiency of the monitoring program for GDEs and any required changes.



The preliminary EC SSTVs will be refined over time as additional data is available, and existing variability including seasonal trends and vertical stratification are further assessed.

The SSTVs will provide an identifiable indication of a potential change in salinity. A management response would be initiated if any of the following occurs:

- EC data continuously exceeds the SSTV over a period of three months and displays a rising trend
- EC data exceeds the SSTV at any time by more than 150%.

If one or both of the above EC triggers are observed a review will be initiated to determine the significance of the exceedance(s) and possible causes, including a review to assess the historical and surrounding monitoring bore data, and modelling predictions (refer to Section 7.2 of the SWMP). Where high saline areas are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in recharge, transmission and discharge zones would be implemented where possible.

6.5 Tunnel inflows and water treatment plant monitoring

Inflows to the WTPs at St Marys, Claremont Meadows, Bringelly Services Facility and Aerotropolis Core are derived primarily through groundwater inflows to excavations that extend below the water table, with additional inflows from rainfall events that result in incidental rainfall over the excavation footprints, and any washdown activities within the catchment of the WTPs.

Inflows to the WTP at Orchard Hills includes a combination of groundwater inflows to the station excavations and tunnels during construction, process water from tunnelling activities and surface works, incidental rainfall over the excavation footprints, and any washdown activities within the catchment of the WTPs.

Daily inflow volumes for groundwater, process water, washdown water and incidental rainfall will be highly variable over the course of the construction activities in response to both progression of the project and natural variability. Variability in flow will be managed through the influent balance tanks of each WTP.

Incidental rainfall into excavations is unlikely to generate significant volumes of additional inflow to WTPs and will be managed through the onsite WTPs, remaining site stormwater falling outside of WTP capture zones will be stored and treated through stormwater management systems (including sediment ponds).

Process water volumes contributing to inflows at Orchard Hills are anticipated to increase from <1 L/s to a peak 5 L/s over the course of construction activities.

Additional inflows from rainfall will be highly variable in response to variable intensity-duration and antecedent soil conditions. However, additional inflows from rainfall are considered unlikely to exceed the treatment capacity of the WTPs.

A summary of the range and average inflow rates for groundwater and process water are summarised in Table 6-12.

Table 6-12: WTP Groundwater Inflow and Process Water Summary

Site Location	Groundwater Inflow Range (L/s)	Average Groundwater Inflow (L/s)	Process Water Inflow Range (L/s)
St Marys	0.0 – 0.21	0.19	0.0
Claremont Meadows	0.0 – 0.26	0.24	0.0
Orchard Hills	0.0 – 1.78	0.40	0.1 – 5.0



Site Location	Groundwater Inflow Range (L/s)	Average Groundwater Inflow (L/s)	Process Water Inflow Range (L/s)
Bringelly	0.0 – 0.31	0.29	0.0
Aerotropolis	0.0 – 0.21	0.18	0.0

A program of ongoing water quality monitoring at each WTP provides an ongoing assessment of effluent water quality and potential risks to the Water Quality Objectives in receiving waterways.

The monitoring program provides monitoring data for effluent water quality retained within the storage tank prior to discharge, including:

1. Live continuous monitoring of pH and turbidity
2. Field monitoring of electrical conductivity
3. Monthly and quarterly sampling and laboratory testing for the parameters listed in Table 7-2 (Section 7.8.2) against the relevant ANZECC / ANZG (2018) 95% and 99% species protection criteria.

All laboratory testing will be undertaken to quantify contaminants at levels commensurate with comparison against the adopted discharge criteria and ANZECC (2000) and ANZG (2018) default guideline values. Contaminants for which practical quantification limits (PQL) are greater than default guideline values will be noted within each monitoring report.



7 Monitoring methodology

7.1 Overview

This section details the groundwater monitoring methodology to be implemented during the SBT Works. Procedures for the collection of continuous and discrete groundwater monitoring data are provided, including all quality assurance / quality control requirements. Specifically, this methodology provides an approach for collection and assessment of the following environmental datasets:

- Groundwater level as mBTOC groundwater and mAHD (measurement and datalogger download)
- Groundwater salinity as electrical conductivity (measurement and datalogger download)
- Groundwater quality at key locations (field measurement and sample collection)
- WTP discharge water quality (field measurement and sample collection)
- Groundwater inflows (collection of pump flow meter data).

The methodology also provides quality assurance / quality control procedures for collecting and managing environmental datasets.

The groundwater sampling methodology has been developed for compliance with the following Australian and International Standards and Guidance:

- AS/NZS 5667.11:1998: Water Quality – Sampling Part 11: Guidance on Sampling of Groundwaters (Reconfirmed 2016)
- AS/NZS 5667.1:1998: Water Quality – Sampling Part 1: Guidance on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples (Reconfirmed 2016)
- Sundaram, B., Feitz, A., Caritat, P. de, Plazinska, A., Brodie, R., Coram, J. and Ransley, T., 2009. Groundwater Sampling and Analysis – A Field Guide. Geoscience Australia, Record 2009/27 95 pp.

7.2 Continuous Groundwater Monitoring

Continuous groundwater monitoring will be undertaken to monitor for changes to groundwater conditions during the SBT Works. The continuous monitoring infrastructure includes a combination of VWP's and standard monitoring bores fitted with dataloggers. The monitoring and data collection methodology for each are discussed in further detail below.

7.2.1 Vibrating Wire Piezometers

The VWP's that form a part of the groundwater monitoring network for the project are identified in Table 6-4 and shown on Figures C-1 to C-7, Annexure A.

VWP's are used to monitor porewater pressure and can also be used to monitor water levels. The VW piezometer converts water pressure to a frequency signal via a diaphragm, a tensioned steel wire, and an electromagnetic coil.

The piezometer is designed so that a change in pressure on the diaphragm causes a change in tension of the wire. An electro-magnetic coil is used to excite the wire, which then vibrates at its natural frequency. The vibration of the wire in the proximity of the coil generates a frequency signal that is transmitted to the readout device.

The readout or data logger stores the reading in Hz. Modern data logger readouts may also automatically convert the reading in Hz to a pressure or level reading when a suitable pre-calibration is used. For non-vented piezometers, barometric pressure corrections are required because the space inside the piezometer is isolated and disconnected from the atmosphere. Vented



piezometers designed to eliminate barometric effects, and as such barometric pressure corrections are not required.

VWPs are set to record data at a maximum interval of once every six hours, and are telemetered with real time data available via the project portal SensGrid. VWP monitoring data will be reviewed on a reviewed on a weekly basis to assess changes in groundwater levels during the initial construction stages of the project for all excavations, including cross-passages, and as TBM operations progress along the alignment.

Results will be presented on continuous data graphs to show any trends in groundwater levels over time, compared to trigger levels, and plotted with rainfall, to assist in identification of trends that may be attributable to construction activities.

7.2.2 Groundwater monitoring bores

The groundwater monitoring bores that form a part of the groundwater monitoring network for the project are identified in Section 6.3 and Figures 6.1 to 6.4.

Select standpipe piezometers have been fitted with level and EC data-loggers for the continuous measurement of groundwater levels and electrical conductivity of groundwater for GDE monitoring, and level monitoring (detailed in Table 6-8).

Data-loggers are set at a depth lower than the predicted minimum water table elevation, accounting for natural variations and artificially induced drawdown, with sensors set within the screened interval for accurate assessment of groundwater salinity.

The data-loggers are set to record data at a maximum interval of every six (6) hours, or hourly for GDE monitoring locations. Monitoring data will be downloaded and reviewed monthly for GDE monitoring, and six monthly for other locations to assess changes in groundwater levels and EC during the construction stages of the project. All data will be downloaded directly from the readouts by manual collection.

The static groundwater level will be measured and recorded at each standpipe piezometer using an oil/water interface probe to verify the continuous data recorded by dataloggers and identify any non-aqueous phase liquid (NAPL) contamination. The methodology for the manual measurement of groundwater levels is summarised in Section 7.3.

7.3 Manual groundwater level measurements

Discrete interval groundwater level monitoring will be undertaken on a regular basis where groundwater is sampled for the construction groundwater monitoring (identified in Section 6 and Figure 6.1 to 6.4) to collect information on groundwater conditions during construction stages of the project.

Groundwater levels will be measured and recorded at all relevant standpipe piezometers using an oil-water interface probe. Measurements collected using the interface probe will be used to verify / calibrate any continuous data collected by data-loggers and check for the presence of any hydrocarbon Light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL).

The level (to the nearest millimetre) of groundwater and LNAPL / DNAPL (if present) will be referenced to a known (and consistent) surveyed point at the top of the bore casing (mTOC). This measurement will be corrected to mAHD using survey data.

Recorded groundwater level will be tabulated in both metres below top of bore casing (mBTOC) and mAHD. The base of the bore will be measured and recorded on each manual groundwater monitoring event by lowering the dipper to the base of the bore until it touches the bottom, where possible



LNAPL product layers will be present as an oil-product layer on top of the groundwater level. DNAPL is determined by lowering the probe to the base of the well.

All groundwater level monitoring will be carried out prior to any purging and sampling activities (where applicable).

7.4 Groundwater Sampling

The purpose of groundwater sampling is to retrieve a water sample that represents the characteristics of water below the ground surface. There are a number of methods that can be adopted to collect representative groundwater samples, including but not limited to:

- Borehole purging
- Low-flow sampling
- Passive sampling
- Hydrasleeve™ sampling.

The sampling methodology selected for the groundwater monitoring program is discussed in the following sections.

7.4.1 Sampling Methodology

The groundwater monitoring program will adopt the Hydrasleeve™ sampling methodology for the collection of all groundwater samples at all sites identified in Section 6.

The Hydrasleeve™ methodology has been adopted as it allows for multi-level sampling in a single well, and are well suited to relatively low permeability aquifers where drawdown can be an issue with low-flow. A Hydrasleeve™ captures a core of water, typically 1 litre, from the screened interval of the well. The Hydrasleeve™ is deployed to a target depth based on screened interval. Where a single depth is sampled, hydrasleeves were installed at 1.5 m below the top of the screen interval (i.e. within the screen). Where the groundwater table was within the screen interval, hydrasleeves are installed at 1.5m below the standing groundwater level.

Prior to installation of the Hydrasleeve™ and/ or sample collection, groundwater levels are to manually gauged.

After installation, the hydrasleeves are left undisturbed until conditions are considered to have stabilised. The time to stabilisation depends on the transmissivity of the aquifer, with more transmissive aquifer stabilising more rapidly. Typically, a minimum of five (5) days should allowed for stabilisation, which is considered appropriate given many bores are screened within the bedrock aquifer.

The Hydrasleeve™ is sealed except during sample collection when it is pulled up through the sampling interval, and re-seals once full. Therefore, only groundwater from the target depth interval is sampled and recovered.

For analysis of volatile organic compounds (VOCs), to reduce volatile losses, samples should be collected as rapidly as practicable with minimal agitation and zero headspace in sample bottles.

Sample containers should be placed directly into ice filled coolers and transported to the NATA-accredited laboratories under Chain of Custody (COC) processes. Samples are required to be documented as received by the laboratory chilled and intact. Samples should be submitted as soon as practicable to the laboratories to prevent loss while in storage or transit, and analysed within recommended holding times.



7.4.2 Field Measurements

Some water quality parameters cannot be reliably measured in the laboratory as their characteristics change over a very short time scale. Parameters to be measured in the field include pH, electrical conductivity (EC), temperature, dissolved oxygen (DO) and redox potential.

Water quality parameters will be measured using a calibrated field water quality meter following sample collection and recorded in the field.

Other visual and olfactory observations such as odour, colour and indications of gross contamination (i.e. LNAPL/ DNAPL) should also be recorded in the field on appropriate field sheets/tablets.

A Standard Operating Procedure (SOP) compliant with AS/NZS 5667.11:1998 should be developed and adhered to for all Hydrasleeve™ sampling operations, including the collection of field parameters.

7.5 Effluent Water Quality – Water Treatment Plant

7.5.1 In-Line Monitoring

The construction WTPs will be designed to include in-line monitoring sensors to monitor pH and turbidity prior to effluent discharge. If either parameter is out of range an alert will be sent to the WTP operator to recirculate water through the WTP until parameters are within the required range. Once parameters are within the required range, effluent will be discharged to either trade waste or the relevant receiving waterway (depending on whether the effluent is suitable for discharge to receiving waterways under the EPL conditions).

7.5.2 Sampling Methodology

Grab samples will be collected manually from the WTP locations once a month to verify that water from the WTPs remain below the limits identified in the EPL. The volume of sample collected will be sufficient for the required physico-chemical (field) parameter analysis using a multi-probe water quality meter(s).

An SOP will be developed to provide a consistent methodology in collection of samples from each WTP.

7.5.3 Field Measurements

Field physico-chemical parameters including temperature, EC, pH, DO, and turbidity will be measured at each sampling location using a calibrated multi-probe hand-held water quality meter immediately prior to collection of water quality samples. The collection of field measurements should follow a similar approach to that of field parameters collected from groundwater monitoring bores (Section 7.4.2).

Other observations including odour, colour and indications of gross contamination will also be recorded on field logging sheets.

7.6 Field Notes

Field notes for each monitoring location will be recorded on appropriate field sheets (hard copy or digital). Details to be recorded on field notes include:

- Unique sampling identification nomenclature consisting of the sample date, location, and sampler details.
- Stable readings from field parameter testing
- Observations of contamination including odour, colour and indications of gross contamination



- Weather conditions at the time of sampling or field investigation
- Any other relevant observations which may affect field or laboratory testing results.

7.7 Field Quality Assurance / Quality Control

7.7.1 Sampling Records

The following information will be included with the results from water quality monitoring:

- The date(s) on which the sample was taken
- The time(s) at which the sample was collected
- The point at which the sample was taken (location ID)
- The name of the person who collected the sample

7.7.2 Decontamination Procedures

All non-disposable sampling equipment will be decontaminated before and between sampling locations to reduce the potential for cross contamination to occur between samples.

Decontamination will include the following procedure:

- Washing non-disposable sampling equipment in a solution of phosphate free detergent (e.g. Liquinox) and potable water
- Rinsing with distilled water
- Rinsing with water from sample location prior to sample collection.

7.7.3 Field Method Blanks

One field method blank will be collected for each sampling round. The field method blank will be used to assess potential for cross contamination from the use of any non-disposable equipment that may be used in the sampling process. The field method blank will be collected by rinsing non-disposable sampling equipment with distilled water (following decontamination procedures) and collecting rinse water in the required laboratory testing containers. Field method blanks will not be required where sampling is conducted without the use of non-disposable equipment.

7.7.4 Intra-Laboratory Duplicates

Intra-laboratory field duplicates will be collected on an average frequency of one sample per twenty samples collected (5%), with an increased frequency for PFAS of one per ten (10%) according to NEMP 2.0. The analytical results of the two split samples will be compared to assess the precision of the sampling protocol, and provide an indication of variability in the sample source. The relative percentage difference (RPD) acceptance limits will be:

- No limit analytical results <10 times Level of reporting (LOR)
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR.

The RPD exceedances (if any) will be assessed to determine whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.7.5 Inter-laboratory Duplicates (Triplicates)

Inter-laboratory field duplicates will be collected on an average frequency of one sample per twenty samples collected (5%) with an increased frequency for PFAS of one per ten (10%) according to NEMP 2.0. The analytical results of the two split samples will be compared to assess the precision of the sampling protocol and provide an indication of variability in the sample source. The relative percentage difference (RPD) acceptance limits will be:



- No limit analytical results <10 times LOR
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR.

RPD exceedances (if any) will be assessed and whether the project data quality objectives (DQO) can still be addressed. If not, then further sampling and/or analysis may be required.

7.7.6 Trip Blanks

Trip blanks will be used and analysed for a batch of samples provided to the laboratory. Trip blanks will be analysed for BTEXN, and assess whether sample storage and transport procedures minimise the introduction of contamination to a sample during storage and transport.

The acceptance limit for analytical results to be below the laboratory reporting limits. The significance of acceptance limit exceedances will be assessed and whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.8 Laboratory Selection and Water Quality Testing Parameters

7.8.1 Laboratory Selection

The primary and secondary laboratories used for this project will be NATA-accredited for the analyses being undertaken.

7.8.2 Laboratory Testing Parameters

All water quality samples will be scheduled for analysis of the parameters identified in Table 6-6 at the nominated NATA accredited testing laboratory, with the testing frequency listed in Table 6-7.

Sampling frequencies will be increased to quarterly sampling where action triggers are exceeded as detailed in Table 6.8, and discussed in Section 6.3.3.

Quality control samples will be analysed for the basic suite (Table 6-6), with additional QC analysis sufficient to meet the duplicate requirements as detailed in Section 7.7.4 and 7.7.5.

7.8.3 Sample Filtration and Preservative Requirements

The proposed sample filtration and preservative requirements for the laboratory testing parameters are presented in Table 7-1. Filtration should be carried out in the field for all samples unless otherwise specified so that results are representative of dissolved concentrations.

Table 7-1: Sample Filtration and Preservative Requirements

Analyte Suite	Field Filtration	Preservative	Comments
General Water Quality	Not Required	Not required	-
Nutrients	0.45µm	Sulfuric acid (H ₂ SO ₄)	-
Dissolved Metals	0.45µm	Not required	-
Total Metals	Not Required	Hydrochloric acid (HCl)	-
Petroleum Hydrocarbons	Not Required	Not required	Sample bottles required to be filled with zero headspace
BTEXN or Volatile organic compounds	Not Required	Sulfuric acid	Sample bottles required to be filled with zero headspace



Analyte Suite	Field Filtration	Preservative	Comments
Semi-volatile organic compounds	Not Required	Not required	Sample bottles required to be filled with zero headspace
Perfluorinated alkyl substances	Not Required	Not required	-

7.9 Laboratory Quality Assurance / Quality Control

7.9.1 Laboratory Data Quality Indicators

The laboratory data quality will be assessed by checking the following:

- Laboratory methods used are NATA accredited
- Laboratory limits of reporting are less than adopted assessment criteria
- Samples are extracted and analysed within holding times
- Results of method blanks, surrogate, lab control sample, spike recoveries, RPDs between primary and duplicate laboratory samples.

Data Quality Indicators (DQI) that will be adopted for quality control samples are presented in Table 7-2.

Table 7-2: Sample Filtration and Preservative Requirements

Type of Quality Control Sample	Control Limit
Method blank	Analytical result < LOR
Surrogate % recovery	50% to 150%
Lab control sample % recovery	70% to 130%
Spike % recovery	70% - 130% for inorganics 60% - 140% for organics
RPD	No limit Analytical results <10 times LOR 50% Analytical results 10-20 times LOR 30% Analytical results >20 times LOR

In the event that the results of a laboratory quality control sample exceed the relevant adopted control limit, the laboratory will be requested assess the significance of the exceedance on the quality of the laboratory analytical data for the relevant batch.

The significance of the control limit exceedance will be assessed and whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.10 Suitability of Sampling Results

If the results of the laboratory analytical data and field data quality assessment are acceptable (i.e., comply with the procedures, requirements and limits set out in Table 7-3, then the sampling data will be considered suitable for the purposes of the project. Data will be assessed for completeness, comparability, representativeness, precision, and accuracy.



Table 7-3: Sampling Data Quality Indicators

Field Considerations	Laboratory Considerations
Completeness	
All critical locations sampled All samples collected (from grid and at depth) SOPs appropriate and complied with Experienced sampler Correct documentation	All critical samples analysed in accordance with the data quality objectives All analytes analysed in accordance with the data quality objectives Appropriate methods and LORs Sample documentation complete Sample holding times compliant
Comparability	
Same SOPs used on each occasion Experienced sampler Climatic conditions (temperature, rainfall, wind) Same types of samples collected (filtered, size fractions)	Sample analytical methods used (including clean-up) Sample LORs (justify/quantify if different) Same laboratories (justify/quantify if different) Same units (justify/quantify if different)
Representativeness	
Appropriate media sampled in accordance with the data quality objectives All media identified in data quality objectives sampled	All samples analysed in accordance with the data quality objectives
Precision	
SOPs appropriate and complied with	Analysis of: <ul style="list-style-type: none"> Laboratory and inter-laboratory duplicates Field duplicates Laboratory-prepared volatile trip spikes
Accuracy	
SOPs appropriate and complied with	Analysis of: <ul style="list-style-type: none"> Feld blanks Rinsate blanks Reagent blanks Method blanks Matrix spikes Matrix spike duplicates Surrogate spikes Reference materials Laboratory control samples Laboratory-prepared spikes

Two types of error should be considered when assessing the results from monitoring, including:

Type I error (false positive): Deciding that water quality samples exceed the environmental trigger values when they do not; and



Type II error (false negative): Deciding that water quality samples do not exceed the environmental trigger values when they do.

The potential for decision errors will be managed through confidence in the reliability of assessment methods (e.g., field observations, laboratory analysis and data review) and appropriate levels of qualification and/or experience in the personnel undertaking the relevant task.

7.11 Suitably Qualified Staff

Any staff or contractors undertaking water quality sampling for the monitoring program should be suitably qualified and experienced to undertake the required activities to ensure a suitable level quality assurance / quality control in sampling results.

At a minimum staff or contractors undertaking water quality sampling must have qualifications and experience relevant to the work being undertaken.



8 Compliance management

8.1 Roles and responsibilities and training

The CPBG organisational structure and overall roles and responsibilities are outlined in Section 4 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Part B of the SWMP.

All employees, contractors and utility staff working on site will undergo site induction training relating to groundwater management issues, detailed in the SWMP.

Further details regarding staff training are outlined in Section 7.8 of the CEMP.

8.2 Groundwater monitoring

Groundwater monitoring requirements are detailed in Section 6 and include the location, parameters to be monitored, analysis suite and frequency of monitoring. Groundwater monitoring methodology is summarised in Section 7.

Additional requirements and responsibilities in relation to inspections are documented in Part B of the SWMP.

8.3 Data analysis and response

Groundwater level records from data loggers will be manually compensated for barometric pressure and converted to the Project datum (m AHD). Manual groundwater level measurements will be corrected for salinity and used to validate the accuracy of continuous groundwater level records.

Groundwater level monitoring results from VWP, data loggers and manual groundwater measurements will be compared to groundwater model predicted drawdown, and if potential adverse impacts arise as a result of this comparison, the implementation of additional mitigation measures will be considered including:

- Targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown
- Design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown
- Supplementing groundwater supply at affected groundwater dependent ecosystems or watercourses
- Make good provisions for groundwater supply wells impacted by changes in groundwater level or quality.

Local rainfall trends will be considered to assess the impacts of seasonal variability in groundwater levels during construction. Groundwater level observations will be used to inform future revision of this GWMP and groundwater model.

Groundwater quality results from monitoring bores will be compared to baseline data following each monitoring event. Trends will be reviewed to assess potential mobilisation of existing contamination due to construction. EC results from data loggers will be compared to SSTVs following data collection and if required, inform the implementation of any mitigation measures.

Water treatment plant sample results will be compared with discharge criteria monthly and reported in the six-monthly groundwater report as detailed in SWMP.



8.4 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, and compliance with this GWMP, the SSI 10051 Planning Approval, and other relevant approvals, licences and guidelines.

Audit requirements are detailed in Section 9.4 of the SWMP.

8.5 Reporting and records

8.5.1 Reporting

The SWMP details the reporting and record keeping requirements and processes, and complaints management and reporting. Reporting requirements specific to the groundwater monitoring program are presented in Table 8-1.

Detailed periodic review and reporting of groundwater level and quality will be conducted during construction, with particular focus during early excavation below the groundwater level. Groundwater level and quality results will be compared to baseline results and adopted performance criteria. Monitoring reports will be submitted to DPE Water, Sydney Water (where required) and Sydney Metro within 60 days of the reporting period unless otherwise agreed with DPE Water.

Table 8-1: Groundwater monitoring reporting schedule

Reporting timing / frequency	Reporting requirement	Report recipient
Groundwater Review Report	A review report will be prepared to document results of the first three months of monitoring new bores. This report will recommend monitoring frequency and analytical suites for construction monitoring, and updates to the GWMP. Selected bores will continue with six monthly monitoring for construction as outlined in Section 6, with the monitoring frequency of the remaining bores and the analytical suite will be reviewed based on the results of baseline assessment monitoring.	DPE Water, Planning Secretary, ER, Sydney Water, NSW EPA (if requested)
Groundwater Monitoring Report (six-monthly)	<p>Construction groundwater level and quality monitoring reports will include data collected during the reporting period. The report will include comparison of observed levels to model predictions and groundwater quality to SSTV and baseline data. A summary of construction status and inflow during the reporting period will be presented. A summary of WTP discharge compliance will be presented.</p> <p>The operation of groundwater management measures during the reporting period will be summarised and the requirement for any additional management measures will be documented.</p> <p>If connection to a Sydney Water asset is required, then the reporting of the data collected under C16(L) would be provided as required by Sydney Water.</p>	DPE Water, Planning Secretary, ER, Sydney Water, NSW EPA (if requested)

Monitoring, reporting and engagement requirements will be agreed with Sydney Water where Sydney Water assets are used to receive discharged water from the SBT Works, as part of a trade waste agreement or similar. The monitoring and reporting requirements for trade waste discharges will be included in the SWMP.



8.5.2 Records

In addition to the record keeping detailed in the SWMP, the following compliance records will be retained by CPBG:

- Records of groundwater monitoring bores and wells in the immediate vicinity of SBT Works sites (If monitoring locations change due to damage to a bore, or a bore need to be added because of the revised modelling predictions, the GWMP will be revised as noted in Section 9)
- Records of groundwater levels and water quality testing
- EPL Annual Reports
- Groundwater monitoring field sheets
- WTP operational performance data
- Laboratory records.



9 Review and Improvement

9.1 Review

Where trigger levels as set out in Section 6 are exceeded, the GWMP will be reviewed, and if necessary, revised to account for the observed conditions. This may include assessment of the appropriateness of existing trigger levels based on the observed response and inferred risk to sensitive groundwater receptors, and revision of trigger levels.

9.2 Continual improvement

Monitoring data will be reviewed throughout construction for continual improvement. Section 9.4 of the SWMP describes the process for the continual improvement of project documents.

Continual improvement of this GWMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets and Project performance outcomes of the EIS for the purpose of identifying opportunities for improvement.

The continual improvement process is intended to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement corrective and preventative action to address any non-conformances and deficiencies (refer to Part B of the SWMP and the CEMP)
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

9.3 Updates to GWMP

This GWMP will be periodically reviewed and updated. A full review and update has been completed now all baseline data is available. The GWMP will be reviewed and revised on an annual basis.

There are a number of mechanisms which may trigger additional review and revision of the document:

- Receipt of new data that materially affects the interpretations that underpin the requirement for groundwater monitoring and/or management
- Completion of further modelling, where the model predictions differ significantly from those used to form the basis for the assessment of groundwater-related impacts and specification of mitigation measures (if required)
- The identification of previously unknown contaminant sources / plume(s) of contaminated groundwater that may be influenced by SBT Works.



10 References

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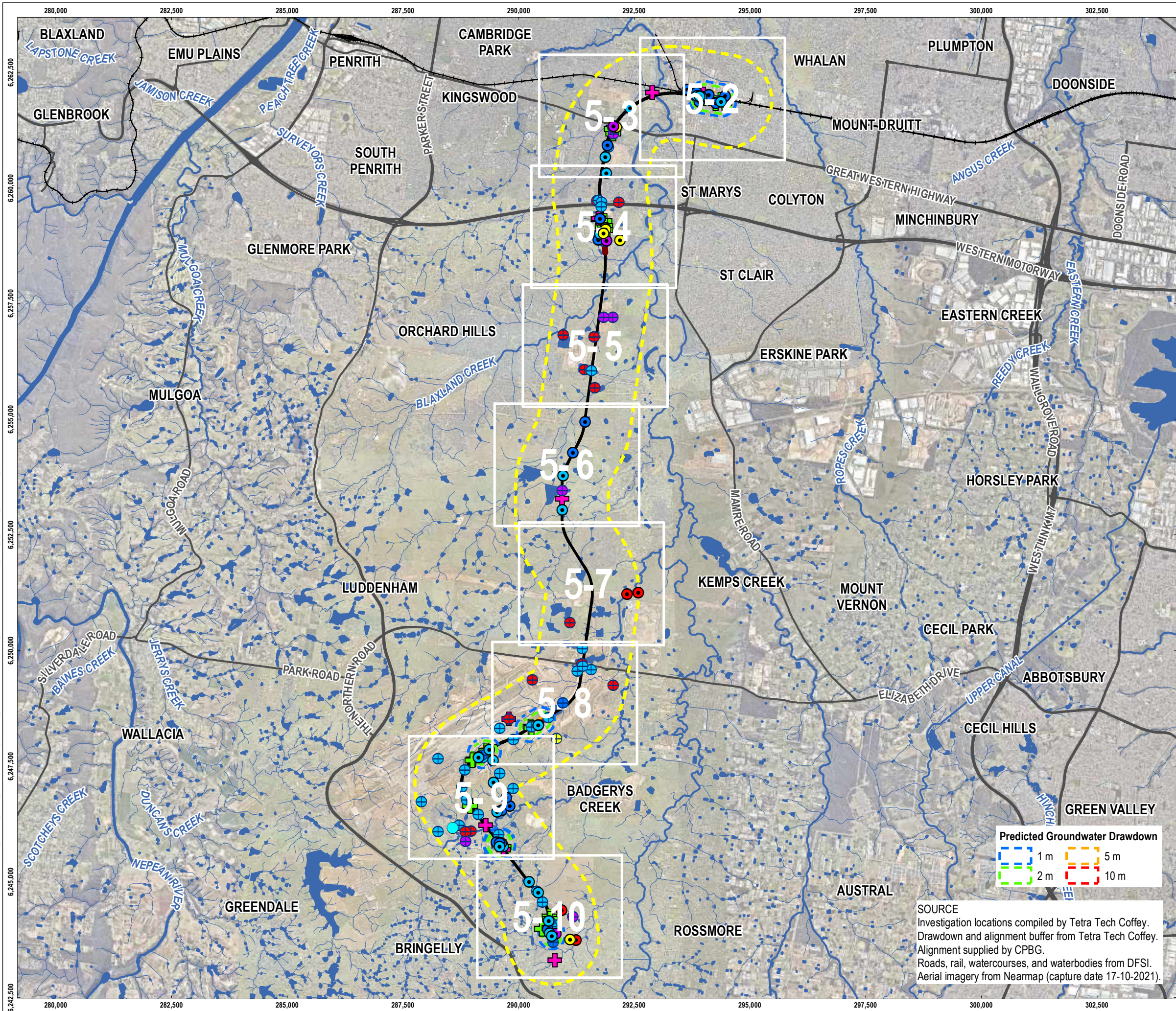
Annexure A Monitoring Network Summary and Figures





Well Details						Construction Details					Monitoring Requirements						Comments
Location ID	Alternate ID	Monitoring Zone	Monitoring Location Type	Aquifer Monitored	Well Status	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mAHD)	VWP sensor depth (mAHD)	Baseline Assessment	Continuous Water Level Monitoring	Construction Monitoring- Water Quality	Weekly Mitigation Monitoring	XP construction - as required	Contingency	
1990 Coff D10	-	WSI	Monitoring bore	Bedrock	Unknown condition	289886	6248066	88	78 - 88	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
1990 Coff D12	-	WSI	Monitoring bore	Bedrock	Destroyed	291270	6249548	59	48.5 - 59	-	Yes	-	-	-	-	-	Destroyed by construction of Seymour White slip road.
1990 Coff D13	-	WSI	Monitoring bore	Alluvium/Bedrock	Destroyed	290822	6248092	73.5	63.15 - 73.5	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
1990 Coff D5	-	WSI	Monitoring bore	Bedrock	Unknown condition	288261	6247663	102.5	82 - 102.5	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
1990 Coff D6	-	WSI	Monitoring bore	Bedrock	Unknown condition	287900	6246723	112.9	87.8 - 112.9	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
1990 Coff D7	-	WSI	Monitoring bore	Bedrock	Unknown condition	288258	6246085	79.4	69.05 - 79.4	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
1990 Coff D9	-	WSI	Monitoring bore	Bedrock	Unknown condition	289591	6247340	87.5	77.25 - 87.5	-	Yes	-	-	-	-	-	Well destroyed in bulk earth works
2018 JK BH-D-161	-	WSI	Monitoring bore	Unknown	Destroyed	292042	6249246	48.2	38.2 - 43.2	-	Yes	-	-	-	-	-	Destroyed in construction of leachate pond.
BB01	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290737	6243959	71.8	59.8 - 65.8	-	Yes	-	-	-	-	-	Destroyed by earthworks
BB02	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290753	6243957	71.7	59.7 - 65.7	-	Yes	-	-	-	-	-	Destroyed by earthworks
BB03	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290750	6243952	71.9	59.9 - 65.9	-	Yes	-	-	-	-	-	Destroyed by earthworks
BB114	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290808	6244063	67.7	55.7 - 61.7	-	Yes	-	-	-	-	-	Destroyed in bulk earthworks
BB116	-	Aerotropolis	Monitoring bore	Residual	Unable to locate	291171	6244247	63.3	57.3 - 60.3	-	Yes	-	-	-	-	-	Unable to locate, suspect destroyed
BH05	-	Orchard Hills	Monitoring bore	Unknown	Unable to Locate	291691	6259715	56.6	47.6 - 50.6	-	Yes	-	-	-	-	-	Unable to Locate
BH09	-	Orchard Hills	Monitoring bore	Bedrock	Unable to Locate	291732	6259731	54.6	42.6 - 51.6	-	Yes	-	-	-	-	-	Unable to Locate
BH1	-	St Marys	Monitoring bore	Residual	Destroyed	293870	6261971	35.5	29.5 - 32.5	-	Yes	-	-	-	-	-	Unable to Locate
BH117	-	M12	Monitoring bore	Unknown	Destroyed	291107	6251013	65.1	52.7 - 58.7	-	Yes	-	-	-	-	-	Destroyed in M12 construction.
BH119	-	M12	Monitoring bore	Unknown	Destroyed	291372	6249710	54	41.9 - 47.9	-	Yes	-	-	-	-	-	Destroyed in M12 construction.
BH14	-	Orchard Hills	Monitoring bore	Bedrock	Removed	291788	6259692	49.6	40.6 - 43.6	-	Yes	-	-	-	-	-	Removed from program - requires TC Nightworks
BH17	-	Orchard Hills	Monitoring bore	Unknown	Unable to Locate	292165	6259690	50.9	41.9 - 44.9	-	Yes	-	-	-	-	-	Unable to Locate
BH207	-	M12	Monitoring bore	Unknown	Existing	292342	6251217	40	22.1 - 34.1	-	Yes	-	-	-	-	-	-
BH209	-	M12	Monitoring bore	Unknown	Existing	292587	6251246	39.4	21.2 - 38.9	-	Yes	-	-	-	-	-	-
BH-C-01	-	WSI	Monitoring bore	Alluvium	Unknown condition	287923	6247697	54.2	49.2 - 53.7	-	Yes	-	-	-	-	-	Destroyed by earthworks
BH-C-05	-	WSI	Monitoring bore	Alluvium	Destroyed	291773	6248524	59.3	47.3 - 54.3	-	Yes	-	-	-	-	-	Destroyed by construction south of leachate pond.
BH-C-08	-	WSI	Monitoring bore	Bedrock	Destroyed	291569	6249582	57.6	45.6 - 53.6	-	Yes	-	-	-	-	-	Destroyed by construction of Seymour White slip road.
BH-D-174	-	WSI	Monitoring bore	Unknown	Unknown condition	290297	6249365	81.6	NK	-	Yes	-	-	-	-	-	Destroyed by earthworks
BH-D-175	-	Airport Dive Portal	Monitoring bore	Unknown	Unknown condition	289796	6248515	81.4	NK	-	Yes	-	-	-	-	-	Destroyed by earthworks
BH-R-01	-	WSI	Monitoring bore	Bedrock	Destroyed	291387	6249658	55.7	35.7 - 41.7	-	Yes	-	-	-	-	-	Destroyed by Elizabeth drive upgrades.
BH-R-08	-	WSI	Monitoring bore	Bedrock	Destroyed	290643	6248549	61.5	31.5 - 37.5	-	Yes	-	-	-	-	-	Destroyed in bulk earthworks
BH-R-21	-	WSI	Monitoring bore	Bedrock	Destroyed	289222	6247676	78.6	60.1 - 66.1	-	Yes	-	-	-	-	-	Destroyed in bulk earthworks
BH-R-34	-	WSI	Monitoring bore	Bedrock	Unknown condition	288713	6246218	71.1	61.1 - 67.1	-	Yes	-	-	-	-	-	Well locked, owner permission denied
BH-R-42	-	WSI	Monitoring bore	Bedrock	Unknown condition	289880	6247019	81.3	57.3 - 63.3	-	Yes	-	-	-	-	-	Well locked, owner permission denied
F Deep	-	WSI	Monitoring bore	Bedrock	Unknown condition	288859	6245870	69.9	39.6 - 42.6	-	Yes	-	-	-	-	-	Well locked, owner permission denied
F Shallow	-	WSI	Monitoring bore	Residual	Unknown condition	288859	6245870	69.9	63.9 - 66.9	-	Yes	-	-	-	-	-	Well locked, owner permission denied
GW105054	-	Luddenham Rd - Orchard Hills	Monitoring bore	Unknown	Removed	291424	6256068	NK	NK	-	Yes	-	-	-	-	-	Removed from program - 3rd party data available
GW105382	-	Luddenham Rd - Orchard Hills	Monitoring bore	Unknown	Unable to locate	291651	6255672	NK	NK	-	Yes	-	-	-	-	-	Unable to locate
GW110454	-	Luddenham Rd - Orchard Hills	Monitoring bore	Unknown	Removed	290961	6256815	NK	NK	-	Yes	-	-	-	-	-	Removed from program - 3rd party data available
GW110455	-	Luddenham Rd - Orchard Hills	Monitoring bore	Unknown	Removed	291628	6256774	NK	NK	-	Yes	-	-	-	-	-	Removed from program - 3rd party data available
K	-	WSI	Monitoring bore	Bedrock	Unknown condition	289587	6248317	72	39.7 - 42.7	-	Yes	-	-	-	-	-	Destroyed by earthworks
MW02	-	Aerotropolis	Monitoring bore	Unknown	Existing	291241	6243734	61.5	55.5 - 58.5	-	Yes	-	-	-	-	-	-
MW1	BH1, MW-1	St Marys	Monitoring bore	Unknown	Existing	293889	6261976	NK	NK	-	Yes	-	Yes	-	-	-	-
MW2	-	St Marys	Monitoring bore	Unknown	Unable to Locate	293887	6261983	NK	NK	-	Yes	-	-	-	-	-	Unable to Locate
MW01	-	Aerotropolis	Monitoring bore	Unknown	Existing	290928	6244381	68.1	62.1 - 65.1	-	Yes	-	-	-	-	-	-
SBT-CM-1022	SBT-GW-1022	St Marys	Monitoring bore	Bedrock	Existing	293832.3	6261980.6	34.287	22.3 - 25.3	-	Yes	-	-	-	Yes	-	-
SBT-CM-1030	SBT-GW-1030	Cross passage / Tunnel (XPN13)	Monitoring bore	Residual/Bedrock	Existing	291923.5	6260911.5	36.807	30.8 - 34.8	-	Yes	-	-	-	Yes	-	-
SBT-GW-0001	-	St Marys	Monitoring bore	Unknown	Existing	293910.9	6261970.2	35.21	NK	-	Yes	-	-	Yes	-	-	-
SBT-GW-0001B	-	St Marys	Monitoring bore	Bedrock	Existing	293910.9	6261970.2	35.211	20.7 - 26.7	-	Yes	-	-	Yes	-	-	-
SBT-GW-1001	SBT-GW-1001 S	St Marys	Monitoring bore	Residual/ Bedrock	Existing	294435.2	6261848.3	48.827	40.8 - 46.8	-	Yes	-	Yes	-	-	-	-
SBT-GW-1002	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	294464.6	6261979.9	42.605	34.6 - 40.6	-	Yes	-	Yes	-	-	-	-
SBT-GW-1005	SBT-GW1005 S	St Marys	Monitoring bore	Residual/ Bedrock	Existing	294262.4	6261825.2	44.195	36.2 - 42.2	-	Yes	-	Yes	-	-	-	-
SBT-GW-1008	-	St Marys	Monitoring bore	-	Removed	-	-	-	-	-	Yes	-	-	-	-	-	Not installed. Replaced with SMGW-BH-A401
SBT-GW-1012	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293930.5	6261971.2	35.361	27.86 - 32.86	-	Yes	-	-	Yes	-	-	-
SBT-GW-1013	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293931.4	6261964.9	35.398	27.90 - 32.90	-	Yes	-	-	Yes	-	-	-
SBT-GW-1014	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293931.8	6261959.4	35.471	27.89 - 32.89	-	Yes	-	-	Yes	-	-	-
SBT-GW-1015	-	St Marys	Monitoring bore	-	Removed	-	-	-	-	-	Yes	-	-	-	-	-	Not installed. Replaced with SBT-GW-0001
SBT-GW-1016	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293905.8	6261847.7	36.122	26.1 - 31.1	-	Yes	-	Yes	-	-	-	-
SBT-GW-1017	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293646.1	6262114.9	32.475	22.5 - 30.5	-	Yes	-	Yes	-	-	-	-
SBT-GW-1019R	SBT-GW-1019 r	St Marys	Monitoring bore	Bedrock	Existing	293888.3	6261978.7	35.196	17.2 - 21.3	-	Yes	-	Yes	-	-	-	-
SBT-GW-1020	SBT-CM-1020	St Marys	Monitoring bore	Alluvium	Existing	293862	6261980.1	34.943	27.9 - 34.9	-	Yes	-	-	-	-	-	-
SBT-GW-1021	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293847.8	6262056.4	33.906	25.6 - 31.6	-	Yes	-	Yes	-	-	-	-
SBT-GW-1024	-	Claremont Meadows SF	Monitoring bore	Alluvium/Bedrock	Existing	292108.9	6261303	28.506	16.51 - 25.51	-	Yes	-	Yes	-	-	-	-
SBT-GW-1028	SBT-GW-1028 S	Claremont Meadows SF	Monitoring bore	Residual	Unable to locate	292050.7	6261167.6	30.487	24.5 - 27.5	-	Yes	-	-	-	-	-	In asbestos exclusion zone
SBT-GW-1031	-	Cross passage / Tunnel (XPN14)	Monitoring bore	Bedrock	Existing	291872.1	6260654	40.808	20.8 - 25.8	-	Yes	-	-	-	Yes	-	-
SBT-GW-1037	SBT-GW-1037 S	Orchard Hills Station	Monitoring bore	Residual/Bedrock	Existing	291757.7	6259320.6	40.544	32.5 - 38.5	-	Yes	-	-	-	-	-	-
SBT-GW-1042	-	Orchard Hills Station	Monitoring bore	Alluvium	Existing	291874.7	6259123.7	40.069	32.1 - 38.1	-	Yes	-	Yes	-	-	-	-
SBT-GW-1043	SBT-GW-1043 S	Orchard Hills Station	Monitoring bore	Alluvium/Bedrock	Existing	291876.5	6259087.8	39.631	31.63 - 37.63	-	Yes	-	-	-	-	-	-
SBT-GW-1048	-	Orchard Hills Station	Monitoring bore	Alluvium/Bedrock	Existing	291955.6	6259007.4	39.642	31.6 - 37.6	-	Yes	-	Yes	-	-	-	-
SBT-GW-1063	-	Orchard Hills Station	Monitoring bore	Alluvium/Bedrock	Existing	292193.5	6258861.3	31.558	20.6 - 29.6	-	Yes	-	-	-	-	-	-
SBT-GW-1347a	-	St Marys	Monitoring bore	Alluvial	Existing	293953.9	6261962.4	35.734	26.7 - 29.7	-	Yes	-	-	-	-	Yes	-
SBT-GW-1347b	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293954.9	6261962.8	35.712	20.7 - 23.7	-	Yes	-	-	-	-	Yes	-
SBT-GW-1347c	-	St Marys	Monitoring bore	Bedrock	Existing	293954.6	6261962.2	35.74	15.7 - 18.7	-	Yes	-	-	Yes	-	-	-
SBT-GW-1348a	-	St Marys	Monitoring bore	Alluvial	Existing	293952.9	6261956.1	35.796	27.3 - 30.3	-	Yes	-	-	-	-	Yes	-
SBT-GW-1348b	-	St Marys	Monitoring bore	Residual/ Bedrock	Existing	293954	6261955.9	35.831	21.8 - 24.8	-	Yes	-	-	-	-	Yes	-

Well Details						Construction Details					Monitoring Requirements						Comments
Location ID	Alternate ID	Monitoring Zone	Monitoring Location Type	Aquifer Monitored	Well Status	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mAHD)	VWP sensor depth (mAHD)	Baseline Assessment	Continuous Water Level Monitoring	Construction Monitoring- Water Quality	Weekly Mitigation Monitoring	XP construction - as required	Contingency	
SBT-GW-1348c	-	St Marys	Monitoring bore	Bedrock	Existing	293953.4	6261957	35.848	15.8 – 18.8	-	Yes	-	-	Yes	-	-	-
SBT-GW-1803	-	St Marys	Monitoring bore	Bedrock	Existing	294375.8	6261850.4	47.649	22.2 - 31.2	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-A103
SBT-GW-1804	-	South Creek	Monitoring bore	Residual	Existing	292194.9	6261580.1	21.021	16.02 - 19.02	-	Yes	-	-	-	Yes	-	Installed to replace SMGW-BH-A107S
SBT-GW-1805	-	Claremont Meadows SF	Monitoring bore	Residual	Existing	292046.7	6261326.1	27.296	18.3 - 24.3	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-A109S
SBT-GW-1806	-	Orchard Hills	Monitoring bore	Bedrock	Existing	291755.3	6258999.8	42.957	19 - 28	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-A017
SBT-GW-1807	-	Orchard Hills	Monitoring bore	Bedrock	Existing	291901.4	6258843.1	37.479	21.5 - 27.5	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-A117
SBT-GW-1808	-	Orchard Hills	Monitoring bore	Residual	Existing	291902.3	6258845.2	37.455	32.5 - 35.5	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-A117S
SBT-GW-3003-A	SBT-GW-3003	Portal / Cross passage XPS01	Monitoring bore	Bedrock	Existing	290425.6	6248380.7	67.706	62.7 - 65.7	-	Yes	-	Yes	-	-	-	-
SBT-GW-3003-B	SBT-GW-3004	Portal / Cross passage XPS01	Monitoring bore	Bedrock	Existing	290424.6	6248382.2	67.378	54.4 - 57.4	-	Yes	-	Yes	-	-	-	-
SBT-GW-3003-C	SBT-GW-3005	Portal / Cross passage XPS01	Monitoring bore	Bedrock	Existing	290423.4	6248384	67.328	45.3 - 48.3	-	Yes	-	Yes	-	-	-	-
SBT-GW-3006	SBT-BH-3006, SBT-GW-3006_w	Airport Terminal	Monitoring bore	Bedrock	Existing	289368	6247844.4	84.305	49.3 - 55.3	-	Yes	-	Yes	-	-	-	-
SBT-GW-3012-A	-	Airport Terminal	Monitoring bore	Bedrock	Existing	289133.2	6247685.6	83.958	76 - 82	-	Yes	-	Yes	-	-	-	-
SBT-GW-3012-B	-	Airport Terminal	Monitoring bore	Bedrock	Existing	289134.8	6247682.9	83.9	67.9 - 73.9	-	Yes	-	Yes	-	-	-	-
SBT-GW-3012-C	-	Airport Terminal	Monitoring bore	Bedrock	Existing	289136.4	6247680.3	83.777	57.8 - 63.8	-	Yes	-	Yes	-	-	-	-
SBT-GW-3022	-	Airport Terminal	Monitoring bore	Bedrock	Existing	289446.1	6247614.1	77.776	62.8 - 74.8	-	Yes	-	Yes	-	-	-	-
SBT-GW-4000	-	Western Sydney Airport	Monitoring bore	Bedrock	Existing	289140.5	6046360.3	72.235	59.24 - 69.74	-	Yes	-	-	-	Yes	-	Replaced SMGW-BH-C209 due to change in XP configuration, need WSA Co. induction
SBT-GW-4002	-	Bringelly SF	Monitoring bore	Bedrock	Destroyed	NK	NK	NK	NK	-	Yes	-	-	-	-	-	Destroyed by earthworks
SBT-GW-4003	-	Bringelly SF	Monitoring bore	Residual/Bedrock	Existing	289518.7	6245851.2	71.932	64.9 - 69.9	-	Yes	-	Yes	-	-	-	-
SBT-GW-4005	SBT-BH-4005	Bringelly SF	Monitoring bore	Bedrock	Existing	289666.8	6245749.6	73.613	53.6 - 53.6	-	Yes	-	Yes	-	-	-	-
SBT-GW-4008	SBT-BH-4008	Cross passage / Tunnel	Monitoring bore	Bedrock	Existing	290230	6244991.9	78.269	50.27 - 56.27	-	Yes	-	-	-	Yes	-	-
SBT-GW-4010	-	Aerotropolis - Bringelly	Monitoring bore	Bedrock	Existing	290427.4	6244758.3	78.779	50.78 - 56.78	-	Yes	-	-	-	Yes	-	Added to program to replace SMGW-BH-D205
SBT-GW-4014	SBT-GW-4014_S	Aerotropolis Station	Monitoring bore	Residual/Bedrock	Existing	290632.2	6243966.3	73.902	59.9 - 68.9	-	Yes	-	Yes	-	-	-	-
SBT-GW-4017	-	Aerotropolis Station	Monitoring bore	Residual	Existing	290805.8	6243870.8	71.334	59.3 - 61.3	-	Yes	-	Yes	-	-	-	-
SBT-GW-4019	SBT-BH-4019	Aerotropolis Station	Monitoring bore	Bedrock	Existing	290669.6	6243885	75.875	45.9 - 55.9	-	Yes	-	-	-	-	-	-
SBT-GW-4020	-	Bringelly SF	Monitoring bore	Bedrock	Destroyed	NK	NK	NK	NK	-	Yes	-	-	-	-	-	Destroyed by earthworks
SBT-GW-4021	-	Aerotropolis Station	Monitoring bore	Alluvium/Bedrock	Existing	291112.5	6243748	62.847	51.9 - 60.9	-	Yes	-	Yes	-	-	-	-
SBT-GW-4022	-	Bringelly SF	Monitoring bore	Bedrock	Destroyed	289586.4	6245761.5	74.332	58.3 - 70.3	-	Yes	-	-	-	-	-	Destroyed by earthworks
SBT-GW-4800	-	Bringelly SF	Monitoring bore	Residual/ Bedrock	Existing	289626.6	6245830	71.432	64.4 - 69.4	-	Yes	-	Yes	-	-	-	Installed to replace SBT-GW-4002
SBT-GW-4801	-	Bringelly SF	Monitoring bore	Residual/ Bedrock	Existing	289580.1	6245835.6	71.372	55.4 - 67.4	-	Yes	-	Yes	-	-	-	Installed to replace SBT-GW-4020
SBT-GW-4802	-	Bringelly SF	Monitoring bore	Bedrock	Existing	289583.3	6245761.2	74.348	58.4 - 70.4	-	Yes	-	Yes	-	-	-	Installed to replace SBT-GW-4022
SBT-GW-4803	-	Aerotropolis	Monitoring bore	Bedrock	Existing	290647.1	6244147.5	72.657	61.7 - 67.7	-	Yes	-	Yes	-	-	-	Installed to replace SMGW-BH-D310
SMGW-BH-A017	-	Orchard Hills Station	Monitoring bore	Bedrock	Destroyed	291728	6258996	43.6	19.6 - 28.6	-	Yes	-	-	-	-	-	Destroyed by trenching works Replaced by SBT-GW-1806
SMGW-BH-A103	-	TBM Tunnel - St Marys	Monitoring bore	Bedrock	Destroyed	294351	6261870	46.4	22.4 - 31.4	-	Yes	-	-	-	-	-	Destroyed by construction (paved road) Replaced by SBT-GW-1803
SMGW-BH-A107	-	TBM Tunnel - South Creek	Monitoring bore	Bedrock	Existing	292413	6261713	22.5	-7	-	Yes	-	-	-	Yes	-	-
SMGW-BH-A107S	-	TBM Tunnel - South Creek	Monitoring bore	Residual	Unable to locate	292413	6261713	22.5	17.5 - 19.5	-	Yes	-	-	-	-	-	Unable to locate Replaced by SBT-GW-1804
SMGW-BH-A109S	-	Claremont Meadows SF	Monitoring bore	Residual	Destroyed	292037	6261297	27.4	22.4 - 23.9	-	Yes	-	-	-	-	-	Destroyed by construction Replaced by SBT-GW-1805
SMGW-BH-A113	-	TBM Tunnel M4	Monitoring bore	Bedrock	Removed	291786	6259594	43.4	14.4 - 23.4	-	Yes	-	-	-	-	-	Removed from program - requires TC Nightworks
SMGW-BH-A117	-	Orchards Hill Station	Monitoring bore	Bedrock	Destroyed	291855	6258838	38.9	22.9 - 28.9	-	Yes	-	-	-	-	-	Destroyed by construction Replaced by SBT-GW-1807
SMGW-BH-A117S	-	Orchard Hills	Monitoring bore	Residual	Destroyed	291857.1	6258839.4	38.78	34.58 - 36.58	-	Yes	-	-	-	-	-	Destroyed by construction Replaced by SBT-GW-1808
SMGW-BH-A121	-	Claremont Meadows SF	Monitoring bore	Bedrock	Destroyed	291944	6260883	38.6	17.6 - 23.6	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-A122	-	Claremont Meadows SF	Monitoring bore	Bedrock	Existing	291893	6260308	41.4	6.4 - 16.4	-	Yes	-	-	-	-	-	-
SMGW-BH-A202	-	St Marys	Monitoring bore	Bedrock	Destroyed	293936.6	6261969.7	35.53	26.03 - 28.03	-	Yes	-	-	-	-	-	Well gatic removed and converted to storm water drain. Well to be decommissioned - replaced by new St Marys wells
SMGW-BH-A302	-	St Marys	Monitoring bore	Residual/Bedrock	Destroyed	293999.2	6261951.4	35.81	24.21 - 30.21	-	Yes	-	-	-	-	-	Destroyed in construction zone as part of cutting and filling works. To be replaced by additional St Marys wells
SMGW-BH-A315	-	Orchard Hills	Monitoring bore	Residual/Bedrock	Existing	291726.6	6258863.8	42.28	32.28 - 38.28	-	Yes	-	Yes	-	-	-	-
SMGW-BH-A361	-	St Marys	Monitoring bore	Bedrock	Existing	293852.4	6261984.6	34.871	17.9 - 23.9	-	Yes	-	-	-	-	-	-
SMGW-BH-A401	-	St Marys	Monitoring bore	Residual/Bedrock	Existing	294106.3	6261997.8	36.51	27.5 - 33.5	-	Yes	-	Yes	-	-	-	Added to program to replace SBT-GW-1008
SMGW-BH-B106	-	Luddenham Road	Monitoring bore	Alluvium	Destroyed	291703	6256950	39.4	35.4 - 38.4	-	Yes	-	-	-	-	-	Well destroyed
SMGW-BH-B109	-	Luddenham Road	Monitoring bore	Bedrock	Destroyed	291572	6256049	41.5	28.5 - 32.5	-	Yes	-	-	-	-	-	Destroyed by construction
SMGW-BH-B120	-	Luddenham Road	Monitoring bore	Bedrock	Existing	290964	6253779	52.6	38.6 - 47.6	-	Yes	-	-	-	-	-	-
SMGW-BH-B121	-	Luddenham Road	Monitoring bore	Residual	Destroyed	290940	6253451	56.6	53.6 - 54.6	-	Yes	-	-	-	-	-	Well destroyed
SMGW-BH-B123	-	Luddenham Road	Monitoring bore	Bedrock	Existing	290939	6253035	57.2	43.2 - 52.2	-	Yes	-	-	-	-	-	-
SMGW-BH-B130	-	Elizabeth Drive	Monitoring bore	Bedrock	Destroyed	291379	6250043	60.3	46.3 - 55.3	-	Yes	-	-	-	-	-	Destroyed by M12 construction
SMGW-BH-B308	-	Luddenham Rd - Orchard Hills	Monitoring bore	Residual	Removed	292032.7	6257200.4	34.82	30.62 - 33.62	-	Yes	-	-	-	-	-	Landowner permission denied
SMGW-BH-B309	-	Luddenham Rd - Orchard Hills	Monitoring bore	Residual	Removed	291835.5	6257202.7	35.63	30.23 - 34.73	-	Yes	-	-	-	-	-	Landowner permission denied
SMGW-BH-B317	-	Orchard Hills	Monitoring bore	Residual/Bedrock	Existing	291440.3	6254935.2	44.23	39.73 - 42.73	-	Yes	-	-	-	-	-	Department of Defence - Requires defence access
SMGW-BH-B319	-	Orchard Hills	Monitoring bore	Residual/Bedrock	Existing	291172.9	6254263.9	50.02	45.22 - 48.22	-	Yes	-	-	-	-	-	-
SMGW-BH-C001S	SMGW-BH-0001S	Badgerys Creek	Monitoring bore	Unknown	Unknown condition	288970	6246102	67	63 - 65	-	Yes	-	-	-	-	-	Well locked, owner permission denied
SMGW-BH-C002	SMGW-BH-0002	Badgerys Creek	Monitoring bore	Unknown	Unknown condition	288852	6246085	66.8	51.8 - 60.8	-	Yes	-	-	-	-	-	Well locked, owner permission denied
SMGW-BH-C201	-	Western Sydney Airport	Monitoring bore	Bedrock	Destroyed	290279.2	6248347.9	68.71	40.11 - 55.11	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-C205SA	-	Western Sydney Airport	Monitoring bore	Residual/Bedrock	Destroyed	289204.9	6247729.9	77.7	72.2 - 75.2	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-C206	-	Western Sydney Airport	Monitoring bore	Bedrock	Unknown condition	288838.3	6247416.3	81.61	54.61 - 60.61	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-C207	-	Western Sydney Airport	Monitoring bore	Bedrock	Unknown condition	288773.1	6247042.2	88.76	50.76 - 59.76	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-C208	-	Western Sydney Airport	Monitoring bore	Bedrock	Destroyed	288877.5	6246773.6	79.46	39.16 - 48.16	-	Yes	-	-	-	-	-	Destroyed by earthworks







Well Details						Construction Details					Monitoring Requirements						Comments
Location ID	Alternate ID	Monitoring Zone	Monitoring Location Type	Aquifer Monitored	Well Status	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mAHD)	VWP sensor depth (mAHD)	Baseline Assessment	Continuous Water Level Monitoring	Construction Monitoring- Water Quality	Weekly Mitigation Monitoring	XP construction - as required	Contingency	
SMGW-BH-C209	-	Western Sydney Airport	Monitoring bore	Bedrock	Removed	289127.8	6246455.3	75.44	46.24 - 55.24	-	Yes	-	-	-	-	-	Replaced by SBT-GW-4000 due to change in XP configuration.
SMGW-BH-C303	-	Western Sydney Airport	Monitoring bore	Residual/Bedrock	Unknown condition	291075.3	6248861.4	60.15	54.65 - 58.65	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-C320	-	Western Sydney Airport	Monitoring bore	Residual/Bedrock	Existing	289629.3	6246534.9	66.47	57.47 - 63.47	-	Yes	-	Yes	-	-	-	-
SMGW-BH-C321	-	Western Sydney Airport	Monitoring bore	Residual/Bedrock	Existing	289808.6	6246630	63.45	57.45 - 61.95	-	Yes	-	Yes	-	-	-	-
SMGW-BH-C324	-	Western Sydney Airport	Monitoring bore	Residual/Bedrock	Existing	289732.8	6246812.8	67.78	57.78 - 63.78	-	Yes	-	-	-	-	-	-
SMGW-BH-C330	-	Western Sydney Airport	Monitoring bore	Bedrock	Existing	289535.1	6246506.5	69.35	60.35 - 66.35	-	Yes	-	Yes	-	-	-	-
SMGW-BH-C332	-	Western Sydney Airport	Monitoring bore	Bedrock	Existing	289459.4	6247135.2	81.83	72.83 - 77.83	-	Yes	-	-	-	-	-	-
SMGW-BH-D109	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290714.9	6243825.3	72.6	52.6 - 61.6	-	Yes	-	-	-	-	-	Well lost - suspect destroyed
SMGW-BH-D109S	-	Aerotropolis	Monitoring bore	Bedrock	Existing	290715.8	6243821.2	72.4	63.45 - 66.45	-	Yes	-	-	-	-	-	-
SMGW-BH-D205	-	Aerotropolis - Bringelly	Monitoring bore	Bedrock	Destroyed	290390.4	6244793.9	79.3	51.3 - 57.3	-	Yes	-	-	-	-	-	Well destroyed. Replaced with SBT-GW-4010
SMGW-BH-D206	-	Aerotropolis - Bringelly	Monitoring bore	Bedrock	Destroyed	290513.1	6244560.3	79.15	51.15 - 57.15	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-D207	-	Aerotropolis - Bringelly	Monitoring bore	Bedrock	Destroyed	290718	6244026.4	70.13	59.13 - 62.13	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-D208	-	Aerotropolis - Bringelly	Monitoring bore	Residual/Bedrock	Destroyed	290742.5	6243690.5	67.87	63.77 - 66.87	-	Yes	-	-	-	-	-	Destroyed by earthworks
SMGW-BH-D310	-	Aerotropolis	Monitoring bore	Bedrock	Destroyed	290672.5	6244145.4	71.55	62.55 - 68.55	-	Yes	-	-	-	-	-	Destroyed by construction Replaced by SBT-GW-4803
SMGW-GW01	GW01, GW-01	St Marys	Monitoring bore	Residual	Existing	293863.6	6261984.7	35.12	27.62 - 30.62	-	Yes	-	-	-	-	-	-
SMGW-GW02	GW02, GW-02	St Marys	Monitoring bore	Residual	Existing	293887.3	6261984	35.39	27.39 - 30.39	-	Yes	-	Yes	-	-	-	-
WSA GW05	WSA GW05	WSI	Monitoring bore	Unknown	Existing	288574	6246161	74	64 - 67	-	Yes	-	-	-	-	-	-
ABP-TD300-VWP01	ABP-TD300	Airport Terminal	VWP	-	Existing	290453.7	6248468.38	62.94	-	55.1	-	Yes	-	-	-	-	-
ABP-TD300-VWP02	ABP-TD300	Airport Terminal	VWP	-	Existing	290453.7	6248468.38	62.94	-	55.1	-	Yes	-	-	-	-	-
ABP-TD300-VWP03	ABP-TD300	Airport Terminal	VWP	-	Existing	290453.7	6248468.38	62.94	-	55.1	-	Yes	-	-	-	-	-
ABP-TD300-VWP04	ABP-TD300	Airport Terminal	VWP	-	Existing	290453.7	6248468.38	62.94	-	55.1	-	Yes	-	-	-	-	-
ATL-SN350-VWP01-01	SBT-VWP-3402	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
ATL-SN350-VWP01-02	SBT-VWP-3402	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
ATL-SN350-VWP01-03	SBT-VWP-3402	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
ATL-SN350-VWP01-04	SBT-VWP-3402	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
ATL-SN350-VWP02-01	SBT-VWP-3403	Bringelly SF	VWP	-	Existing	289609.96	6245825.35	71.313	-	59.998	-	Telemetry not installed	-	-	-	-	-
ATL-SN350-VWP02-02	SBT-VWP-3403	Bringelly SF	VWP	-	Existing	289570.22	6245793.49	73.53	-	59.998	-	Telemetry not installed	-	-	-	-	-
ATL-SN350-VWP02-03	SBT-VWP-3403	Bringelly SF	VWP	-	Existing	289666.84	6245755.19	73.516	-	59.998	-	Telemetry not installed	-	-	-	-	-
SWD-TU100-17275-VWP01-A	SBT-GW-1001	St Marys	VWP	-	Existing	294366.53	6261901	37.671	-	20.155	-	Yes	-	-	-	-	-
SWD-TU100-17275-VWP01-B	SBT-GW-1001	St Marys	VWP	-	Existing	294262.15	6261823.15	44.557	-	20.155	-	Yes	-	-	-	-	-
SWD-TU100-17351-VWP02	SBT-VWP-1400	XP-S07/ Airport Terminal Temp Shaft	VWP	-	Existing	288984.85	6247640.4	84.58	-	14.721	-	Yes	-	-	-	-	-
SWD-TU100-17443-VWP03-A	SBT-GW-1005	St Marys	VWP	-	Existing	294001.37	6261933.76	36.407	-	13.557	-	Yes	-	-	-	-	-
SWD-TU100-17443-VWP03-B	SBT-GW-1005	XP-S07/ Airport Terminal Temp Shaft	VWP	-	Existing	289022.34	6247666.51	84.63	-	13.557	-	Yes	-	-	-	-	-
SWD-TU100-17720-VWP04	SBT-VWP-1401	-	VWP	-	-	-	-	-	-	13.407	-	Yes	-	-	-	-	-
SWD-TU100-19957-VWP05-01	SBT-VWP-1402	Claremont Meadows	VWP	-	Existing	292018.33	6261280.67	26.948	-	6.002	-	Yes	-	-	-	-	-
SWD-TU100-19957-VWP05-02	SBT-VWP-1402	Claremont Meadows	VWP	-	Existing	292018.33	6261280.67	26.948	-	6.002	-	Yes	-	-	-	-	-
SWD-TU100-19957-VWP05-03	SBT-VWP-1402	Claremont Meadows	VWP	-	Existing	292018.33	6261280.67	26.948	-	6.002	-	Yes	-	-	-	-	-
SWD-TU100-19992-VWP06-01	SBT-VWP-1403	Orchard Hills	VWP	-	Existing	291758.78	6259323.57	39.597	-	5.998	-	Yes	-	-	-	-	-
SWD-TU100-19992-VWP06-02	SBT-VWP-1403	Orchard Hills	VWP	-	Existing	291758.78	6259323.57	39.597	-	5.998	-	Yes	-	-	-	-	-
SWD-TU100-19992-VWP06-03	SBT-VWP-1403	Orchard Hills	VWP	-	Existing	291875.98	6259094.91	39.499	-	5.998	-	Yes	-	-	-	-	-
SWD-TU100-20071-VWP07-A	SBT-GW-1028	Claremont Meadows	VWP	-	Existing	292049.66	6261277.91	26.872	-	2.813	-	Yes	-	-	-	-	-
SWD-TU100-20071-VWP07-B	SBT-GW-1028	Claremont Meadows	VWP	-	Existing	292049.66	6261277.91	26.872	-	2.813	-	Yes	-	-	-	-	-
SWD-TU150-21965-VWP01-A	SBT-GW-1037	Orchard Hills	VWP	-	Existing	291875.98	6259094.91	39.499	-	16.597	-	Yes	-	-	-	-	-
SWD-TU150-21965-VWP01-B	SBT-GW-1037	Orchard Hills	VWP	-	Existing	291860.78	6259289.87	38.81	-	16.597	-	Yes	-	-	-	-	-
SWD-TU150-22010-VWP02	SBT-VWP-1404	Orchard Hills	VWP	-	Existing	291885.11	6259049.02	40.28	-	22.81	-	Yes	-	-	-	-	-
SWD-TU150-22115-VWP03	SBT-VWP-1405	Orchard Hills	VWP	-	Existing	291819.18	6258954.04	40.795	-	23.582	-	Yes	-	-	-	-	-
SWD-TU150-22120-VWP04	SBT-VWP-1406	St Marys	VWP	-	Existing	294435.35	6261848.2	49.155	-	21.929	-	Yes	-	-	-	-	-
SWD-TU150-22193-VWP05-A	SBT-GW-1043	Orchard Hills	VWP	-	Existing	291809.07	6259171.24	39.582	-	20.499	-	Yes	-	-	-	-	-
SWD-TU150-22193-VWP05-B	SBT-GW-1043	Orchard Hills	VWP	-	Existing	291856.09	6259233.73	36.429	-	20.499	-	Yes	-	-	-	-	-
SWD-TU150-22205-VWP06	SBT-VWP-1407	St Marys	VWP	-	Existing	294435.35	6261848.2	49.155	-	24.28	-	Yes	-	-	-	-	-
SWD-TU150-22333-VWP07	SBT-VWP-1408	St Marys	VWP	-	Existing	294262.15	6261823.15	44.557	-	24.795	-	Yes	-	-	-	-	-
SWD-TU300-33565-VWP02	SBT-VWP-3401	Airport Portal	VWP	-	Existing	290542.13	6248450.48	67.466	-	52.466	-	Yes	-	-	-	-	-
SWD-TU300-33586-VWP01	SBT-VWP-3400	Airport Portal	VWP	-	Existing	290421.72	6248468.38	65.723	-	50.723	-	Yes	-	-	-	-	-
SWD-TU300-34874-VWP03-01	ATL-SN350-VWP01	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34874-VWP03-02	ATL-SN350-VWP01	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34874-VWP03-03	ATL-SN350-VWP01	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34874-VWP03-04	ATL-SN350-VWP01	Airport Terminal	VWP	-	Existing	289293.55	6247837.34	84.6	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34893-VWP04-01	ATL-SN350-VWP02	Airport Terminal	VWP	-	Existing	289287.18	6247775.06	82.5	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34893-VWP04-02	ATL-SN350-VWP02	Airport Terminal	VWP	-	Existing	289287.18	6247775.06	82.5	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34893-VWP04-03	ATL-SN350-VWP02	Airport Terminal	VWP	-	Existing	289287.18	6247775.06	82.5	-	60	-	Yes	-	-	-	-	-
SWD-TU300-34893-VWP04-04	ATL-SN350-VWP02	Airport Terminal	VWP	-	Existing	289287.18	6247775.06	82.5	-	60	-	Yes	-	-	-	-	-
SWD-TU351-35209-VWP01	SBT-VWP-3404	-	VWP	-	-	-	-	-	-	58.1	-	Yes	-	-	-	-	-
SWD-TU351-35240-VWP02	SBT-VWP-3405	-	VWP	-	-	-	-	-	-	57.8	-	Yes	-	-	-	-	-
SWD-TU351-37371-VWP04	SBT-VWP-4400	Claremont Meadows	VWP	-	Existing	292050.01	6261167.99	30.813	-	50.313	-	Yes	-	-	-	-	-
SWD-TU351-37377-VWP05	SBT-VWP-4401	Claremont Meadows	VWP	-	Existing	292050.01	6261167.99	30.813	-	52.53	-	Yes	-	-	-	-	-
SWD-TU351-37471-VWP06	SBT-VWP-4402	Claremont Meadows	VWP	-	Existing	292049.66	6261277.91	26.872	-	52.516	-	Yes	-	-	-	-	-
SWD-TU400-39287-VWP01	SBT-VWP-4403	Aerotropolis	VWP	-	Existing	290678.8	6244221.52	72.636	-	57.506	-	Yes	-	-	-	-	-
SWD-TU400-39340-VWP02	SBT-VWP-4404	Aerotropolis	VWP	-	Existing	290713.24	6244100.06	71.031	-	55.831	-	Yes	-	-	-	-	-
SWD-TU400-39532-VWP03	SBT-VWP-4405	Aerotropolis	VWP	-	Existing	290633.34	6244057.27	73.797	-	55.167	-	Yes	-	-	-	-	-
SWD-TU400-39565-VWP04-A	SBT-GW-4014	Aerotropolis	VWP	-	Existing	290629.58	6243965.78	73.749	-	47.749	-	Yes	-	-	-	-	-
SWD-TU400-39565-VWP04-B	SBT-GW-4014	Aerotropolis	VWP	-	Existing	290629.58	6243965.78	73.749	-	47.749	-	Yes	-	-	-	-	-
SWD-TU400-39606-VWP05	SBT-VWP-4406	Aerotropolis	VWP	-	Existing	290746.98	6243921.43	72.535	-	44.535	-	Yes	-	-	-	-	-








LEGEND

-  Existing VWP
 Proposed VWP

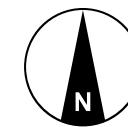
Existing Monitoring Bore


-  Alluvium
-  Alluvium/Bedrock
-  Bedrock
-  Residual
-  Residual/Bedrock
-  Unknown

Monitoring Bore	Destroyed/	Lost/	Unable to be Accessed
1			
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3			
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- | | |
|---|------------------|
|  | Alluvium/Bedrock |
|  | Bedrock |
|  | Residual |
|  | Residual/Bedrock |
|  | Unknown |

-




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PROJECTION: GDA2020 MGA Zone 56

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WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

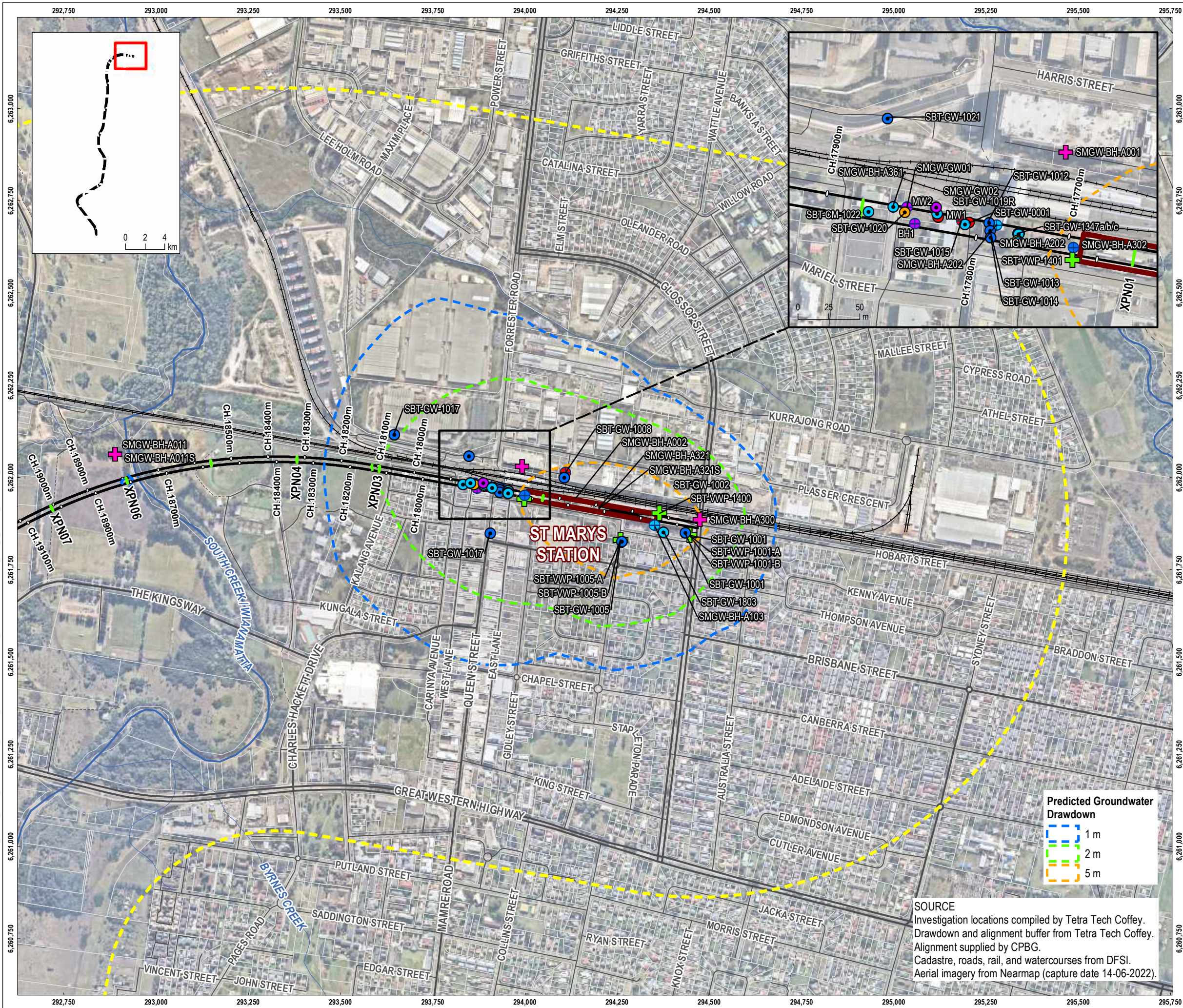
FIGURE 5-1

Groundwater Monitoring Locations
Groundwater Monitoring Plan











DATE: 22.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_F001_GIS_REVA


















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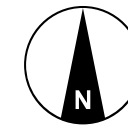


LEGEND

-  Existing VWP
 Proposed VWP
 Existing Monitoring Bore
 Alluvium
 Alluvium/Bedrock
 Bedrock
 Residual
 Residual/Bedrock
 Unknown

Monitoring Bore	Destroyed/	Lost/	Unable to be Accessed
1			
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100			

-
- Legend:
-  Bedrock
 -  Residual
 -  Residual/Bedrock
 -  Unknown
 -  Project Alignment
 -  Project Alignment Chainage
 -  Project Alignment Cross Passage
 -  Project Alignment Structure
 -  Railway
 -  Major Road
 -  Minor Road
 -  Track
 -  Path
 -  Perennial Watercourse
 -  Non-perennial Watercourse
 -  Cadastral Boundary
 -  Project Alignment Buffer (1 km)



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PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

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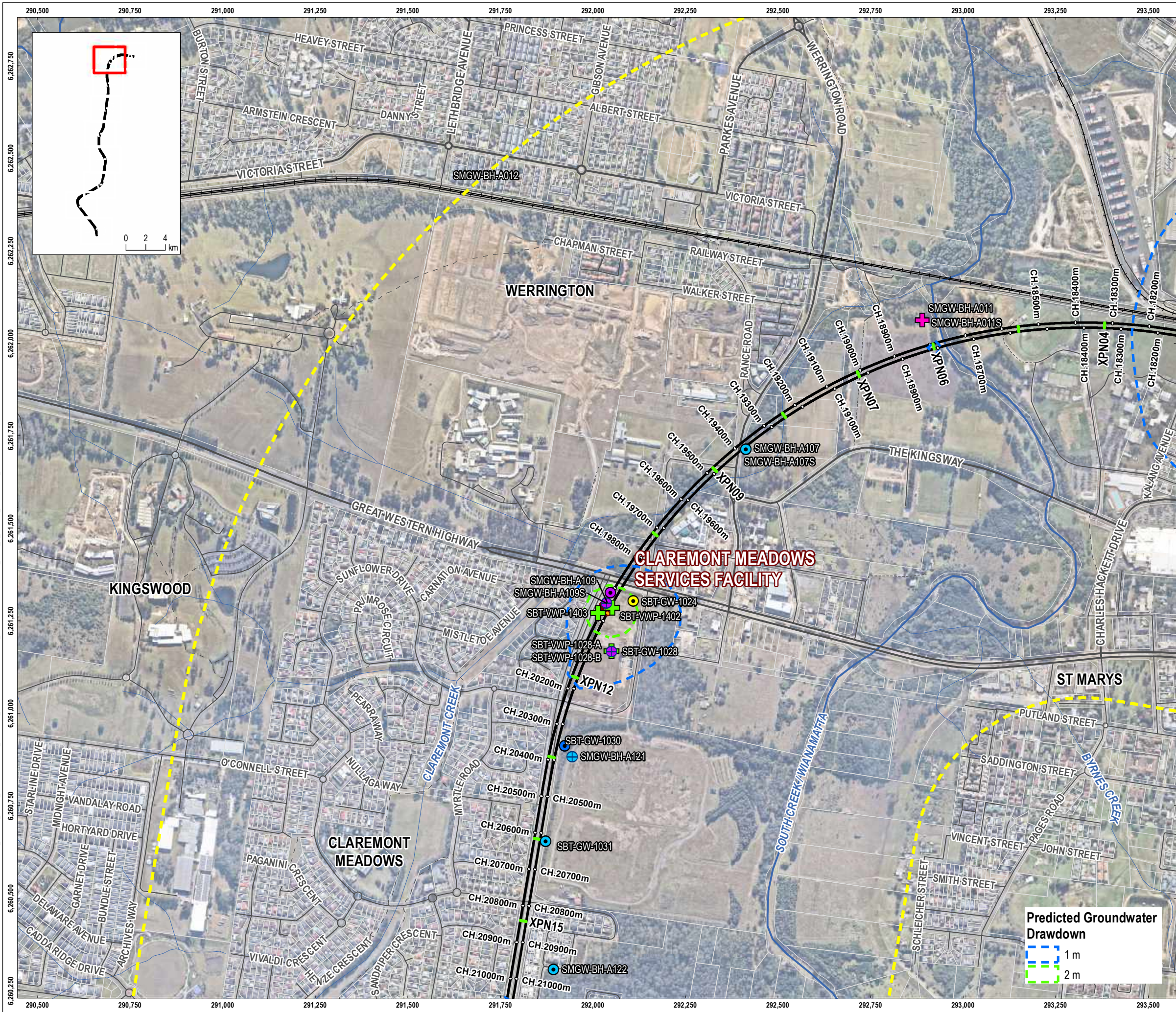
WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 5-2

Groundwater Monitoring Locations
Groundwater Monitoring Plan



DATE: 22.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_F002_GIS_REVA

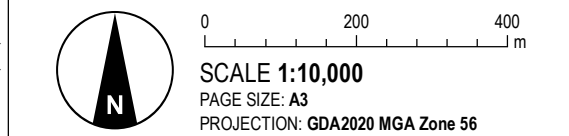


LEGEND

- Existing VWP
- Proposed VWP
- Existing Monitoring Bore
- Alluvium/Bedrock
- Bedrock
- Residual
- Residual/Bedrock
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
- Bedrock
- Residual
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE

Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastral, roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



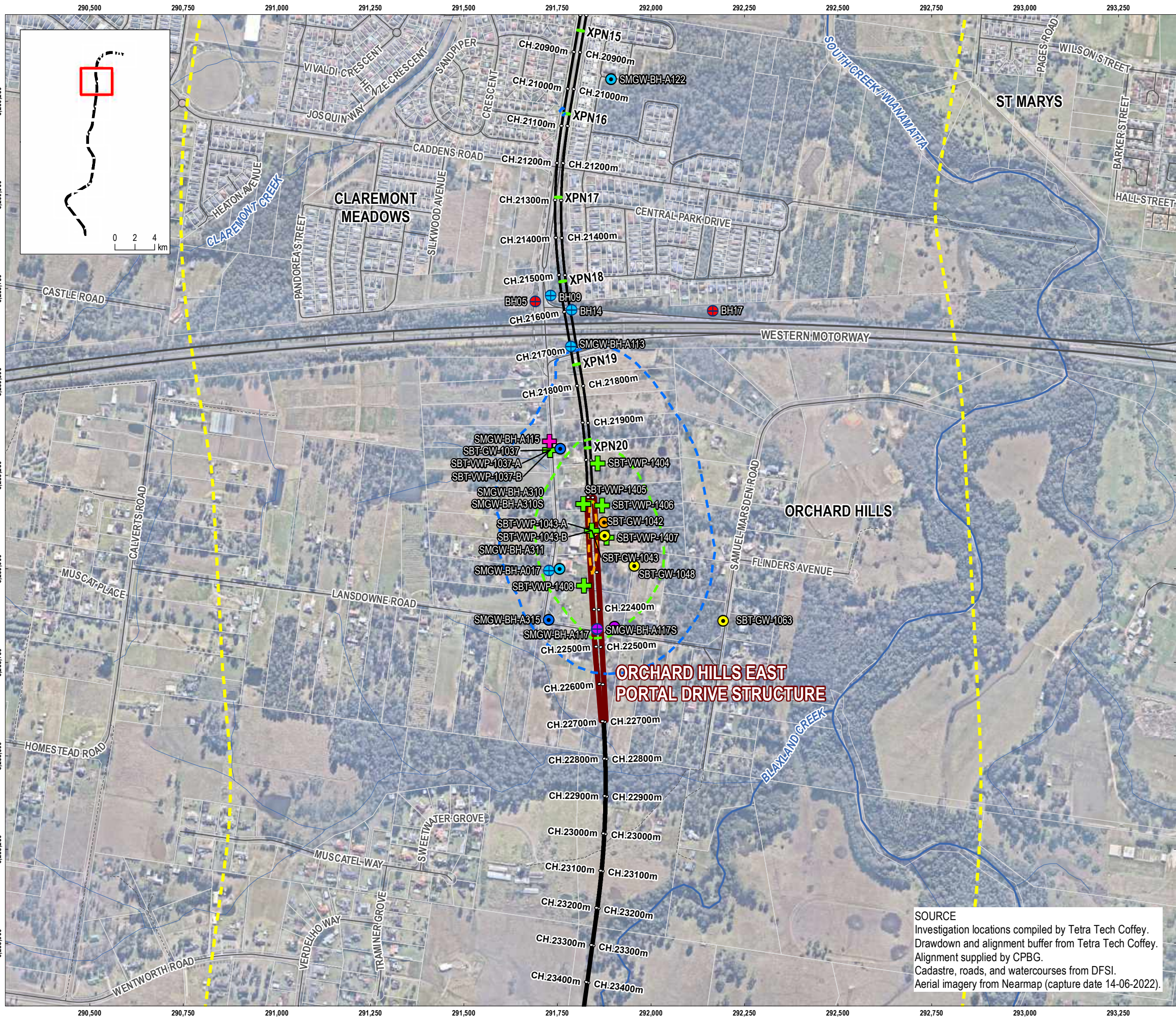
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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-3

Groundwater Monitoring Locations
Groundwater Monitoring Plan



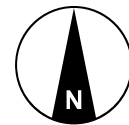


SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Drawdown and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



LEGEND

- Existing VWP
- Proposed VWP
- Existing Monitoring Bore
 - Alluvium
 - Alluvium/Bedrock
 - Bedrock
 - Residual
 - Residual/Bedrock
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
 - Bedrock
 - Residual
 - Unknown
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
- Predicted Groundwater Drawdown
 - 1 m
 - 2 m
 - 5 m



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PROJECTION: GDA2020 MGA Zone 56

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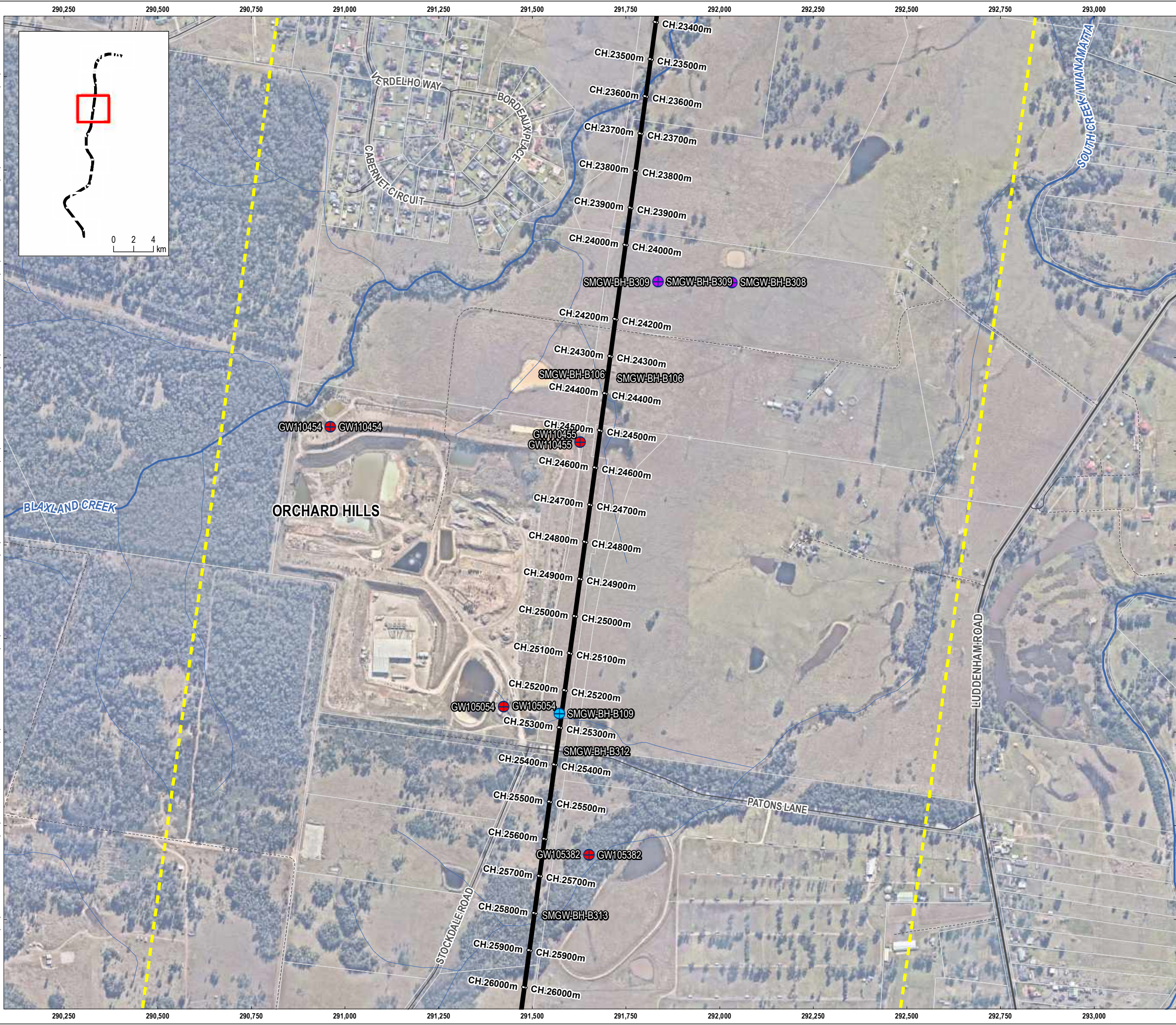
WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-4

Groundwater Monitoring Locations
Groundwater Monitoring Plan



TETRA TECH
COFFEY




LEGEND

Destroyed/ Lost/ Unable to be Accessed Monitoring Bore

- Bedrock
- Residual
- Unknown
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-5

Groundwater Monitoring Locations

Groundwater Monitoring Plan

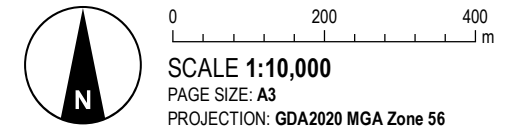




LEGEND

- Existing VWP
- Existing Monitoring Bore
 - Bedrock
 - Residual/Bedrock
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
 - Residual
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

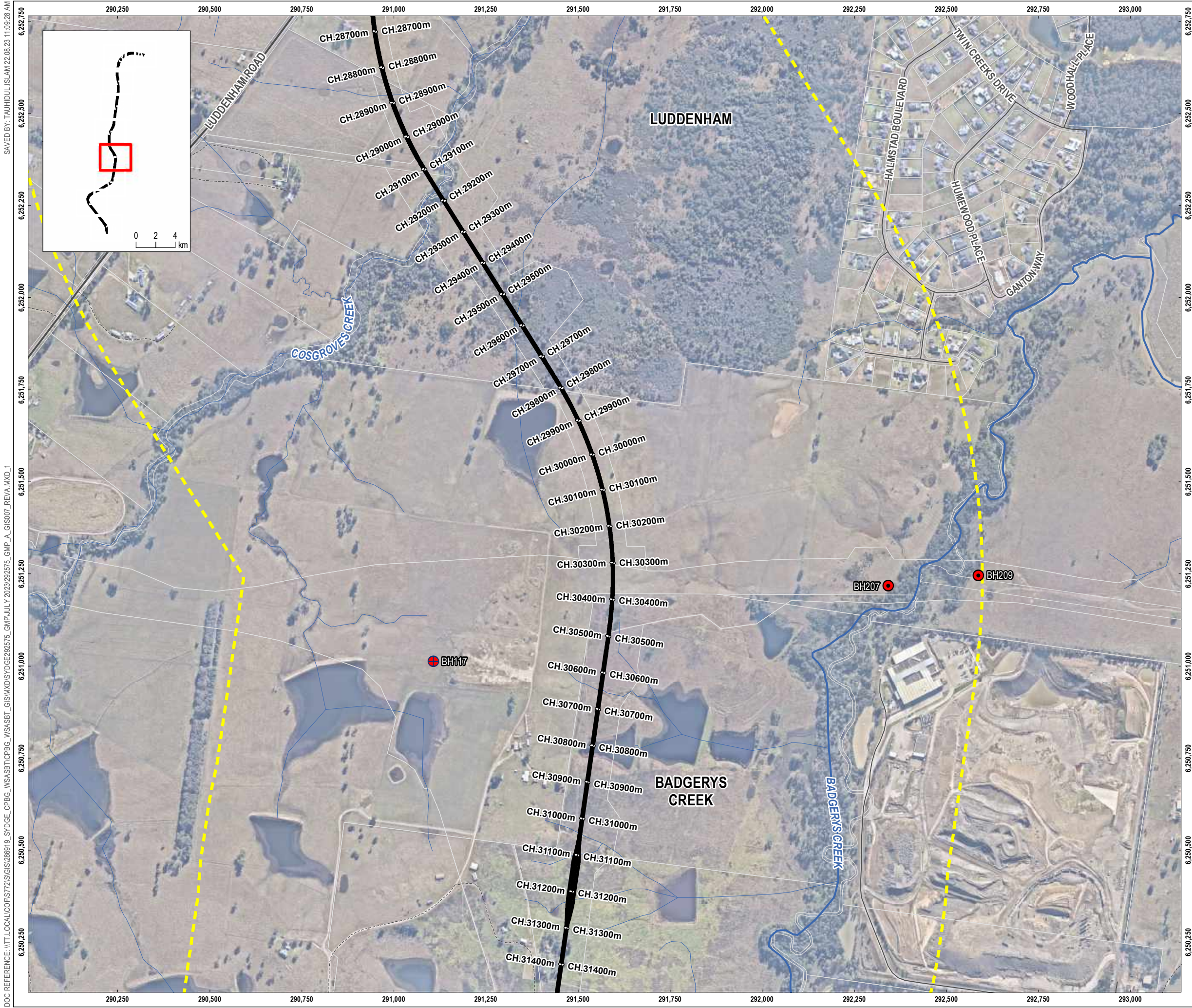
SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-6
Groundwater Monitoring Locations
Groundwater Monitoring Plan






LEGEND

- Existing Monitoring Bore
 - Unknown
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
 - Unknown
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastrre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



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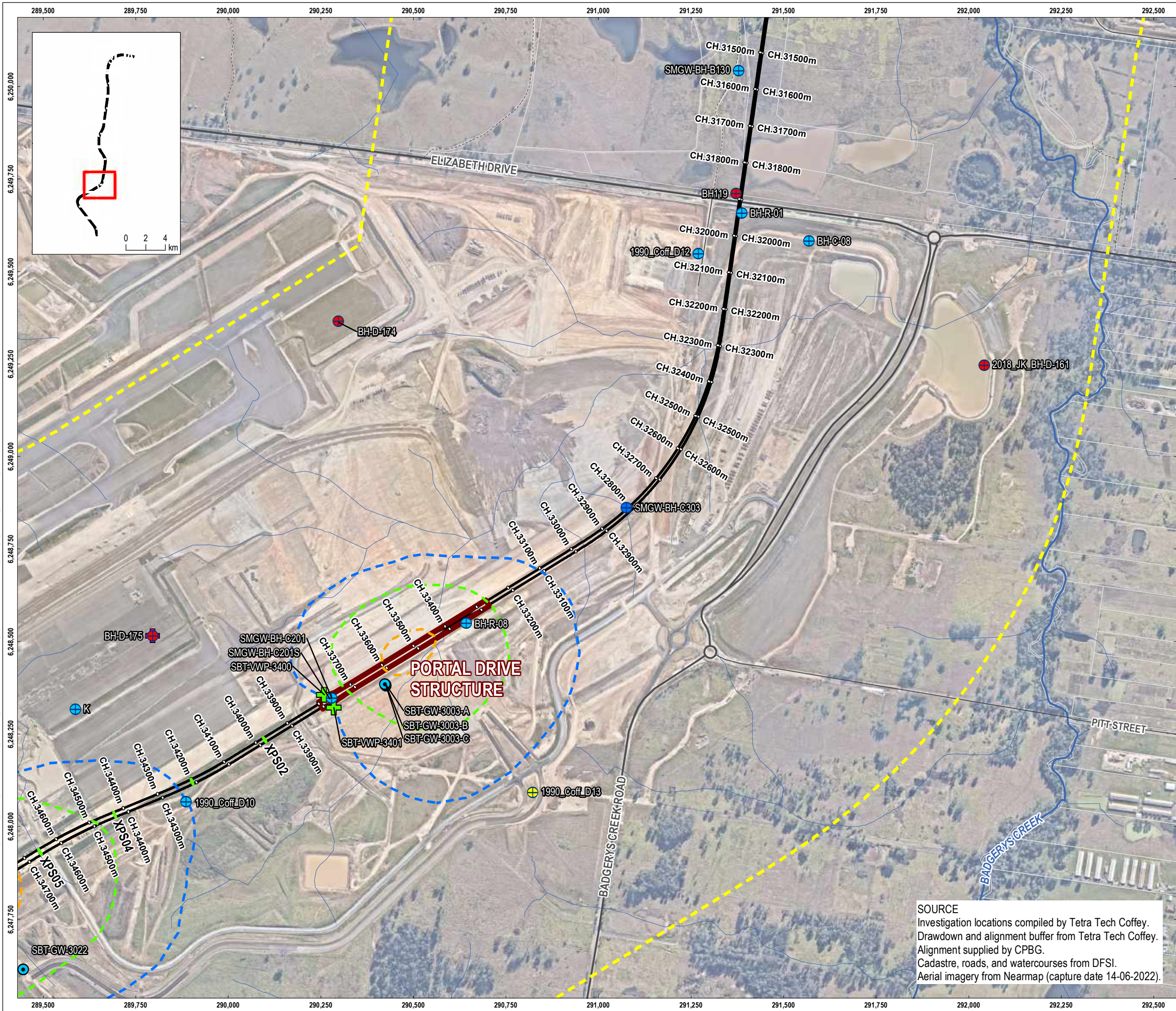
WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-7

Groundwater Monitoring Locations

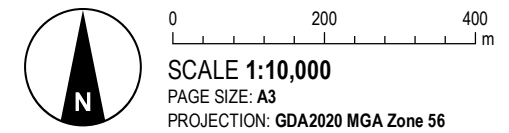
Groundwater Monitoring Plan





LEGEND

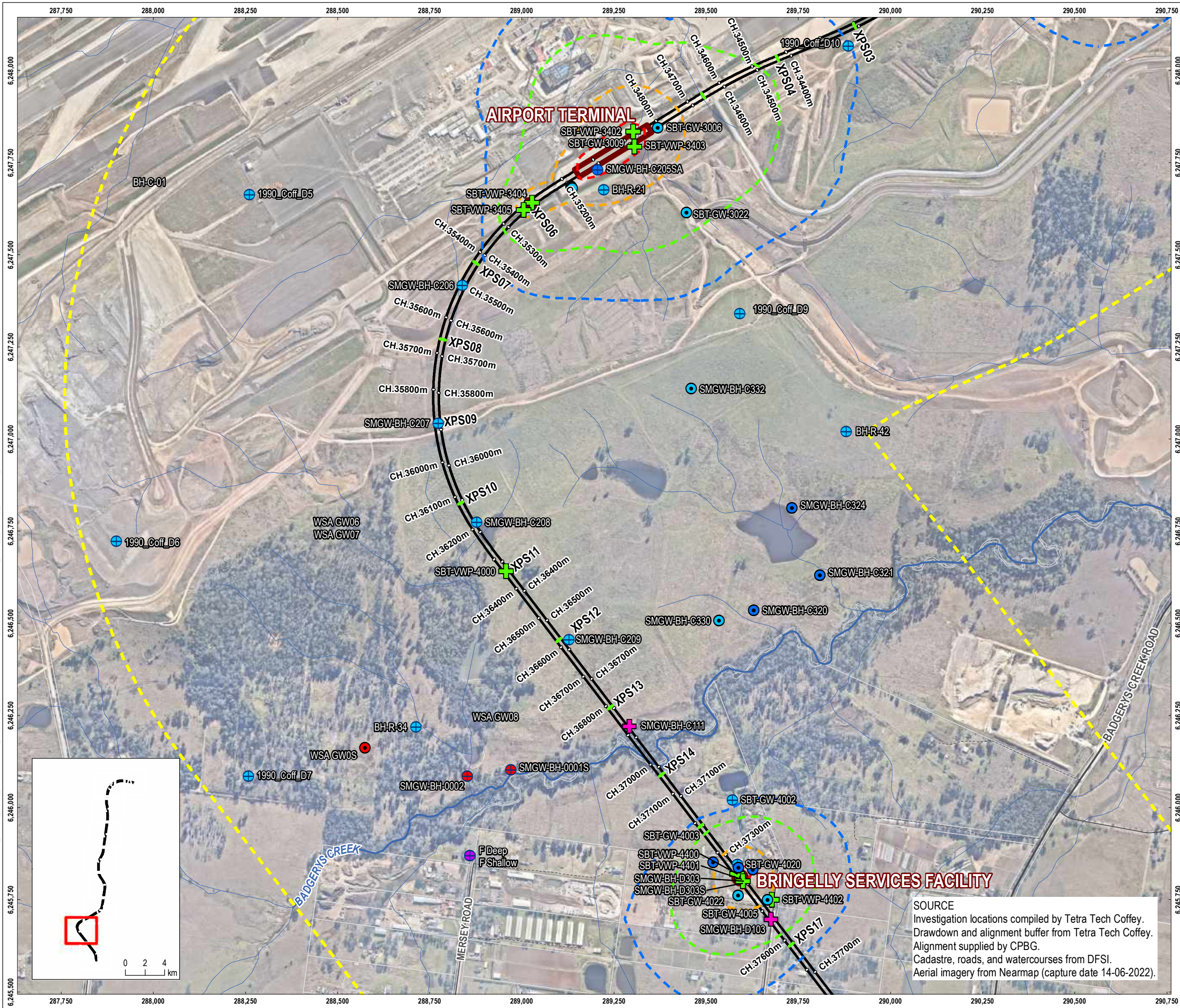
- Existing VWP
- Proposed VWP
- Existing Monitoring Bore
- Bedrock
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
- Alluvium/Bedrock
- Bedrock
- Residual/Bedrock
- Unknown
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
- Predicted Groundwater Drawdown
- 1 m
- 2 m
- 5 m



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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

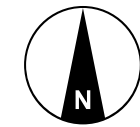
FIGURE 5-8
Groundwater Monitoring Locations
Groundwater Monitoring Plan





LEGEND

-
- Existing VWP**
 Existing VWP
- Proposed VWP**
 Proposed VWP
- Existing Monitoring Bore**
- Bedrock
 - Residual/Bedrock
 - Unknown
- Destroyed/ Lost/ Unable to be Accessed Monitoring Bore**
- Bedrock
 - Residual
 - Residual/Bedrock
 - Unknown
- Project Alignment**
 Project Alignment
- Project Alignment Chainage**
 Project Alignment Chainage
- Project Alignment Cross Passage**
 Project Alignment Cross Passage
- Project Alignment Structure**
 Project Alignment Structure
- Major Road**
 Major Road
- Minor Road**
 Minor Road
- Track**
 Track
- Perennial Watercourse**
 Perennial Watercourse
- Non-perennial Watercourse**
 Non-perennial Watercourse
- Cadastral Boundary**
 Cadastral Boundary
- Project Alignment Buffer (1 km)**
 Project Alignment Buffer (1 km)
- Predicted Groundwater Drawdown**
- 1 m
 - 2 m
 - 5 m
 - 10 m



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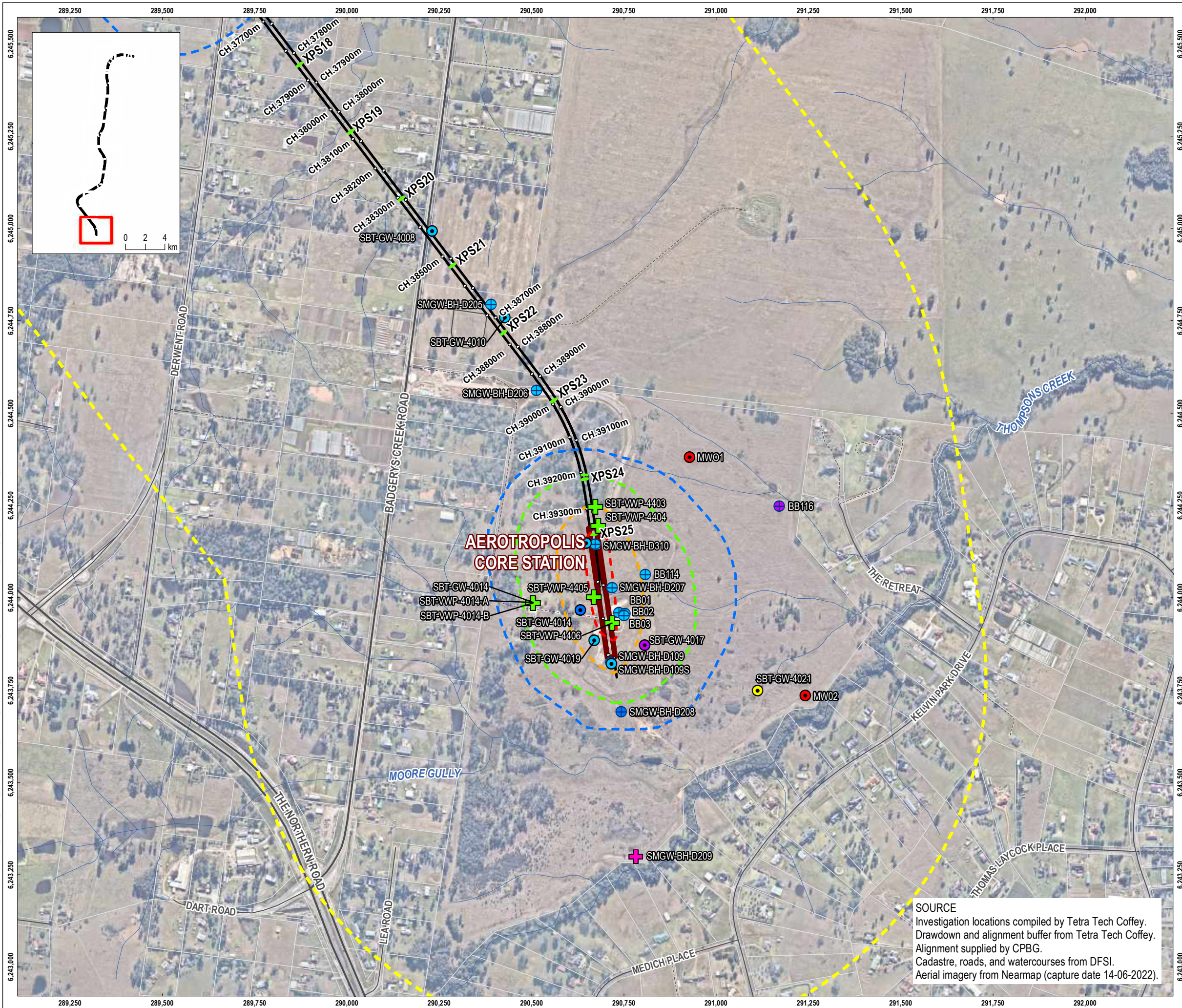
WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 5-9

























Groundwater Monitoring Locations
Groundwater Monitoring Plan

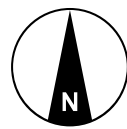


DATE: 22.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_F009_GIS_REVA



LEGEND

-  Existing VWP
 Proposed VWP
 Existing Monitoring Bore
 Alluvium/Bedrock
 Bedrock
 Residual
 Residual/Bedrock
 Unknown
 Destroyed/ Lost/ Unable to be Accessed Monitoring Bore
 Bedrock
 Residual
 Residual/Bedrock
 Project Alignment
 Project Alignment Chainage
 Project Alignment Cross Passage
 Project Alignment Structure
 Major Road
 Minor Road
 Track
 Non-perennial Watercourse
 Cadastral Boundary
 Project Alignment Buffer (1 km)
 Predicted Groundwater Drawdown
 1 m
 2 m
 5 m
 10 m



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PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT STATION BOXES AND TUNNELLING WORKS

FIGURE 5-10
Groundwater Monitoring Locations
Groundwater Monitoring Plan



DATE: 22.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_F010_GIS_REVA

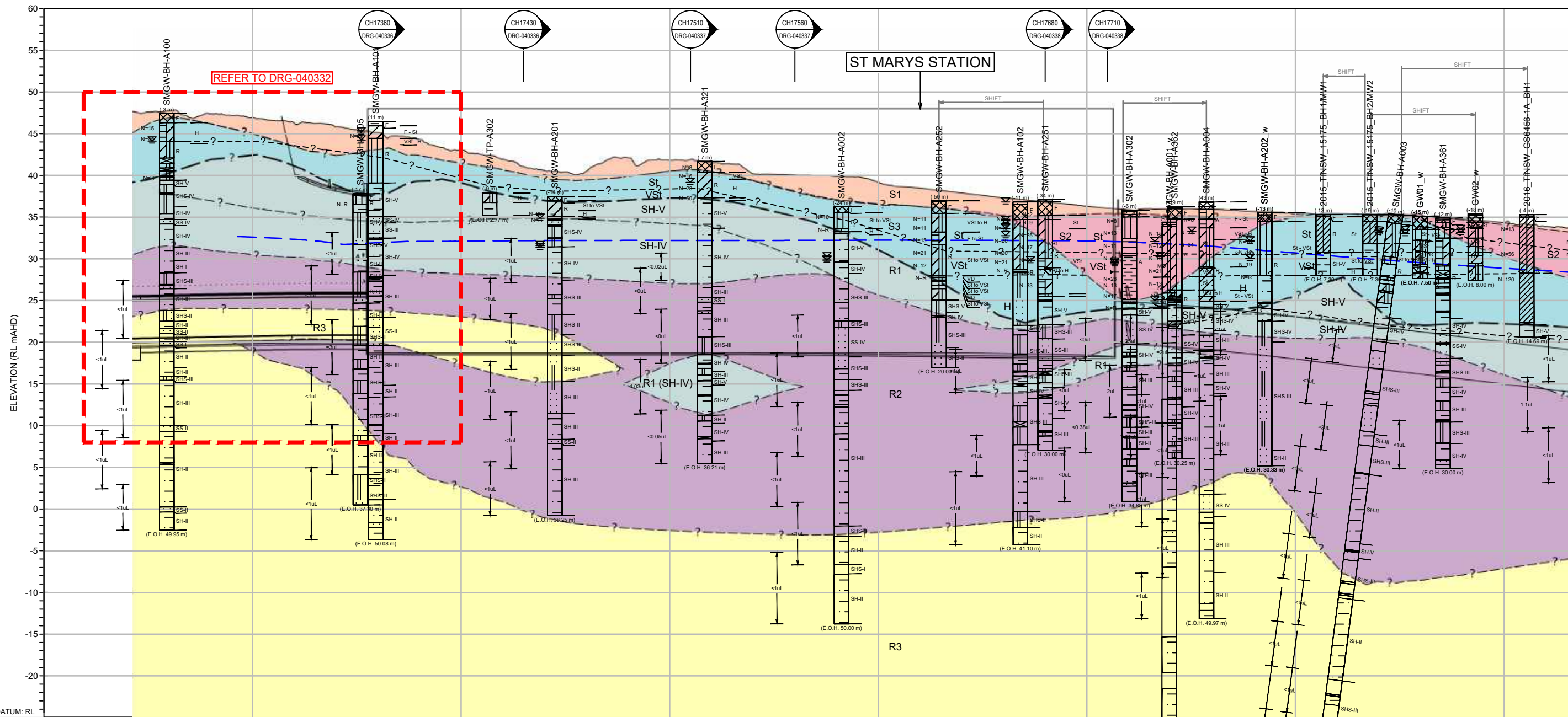
DISCLAIMER: THIS FIGURE HAS BEEN PRODUCED FOR INTERNAL REVIEW ONLY AND MAY CONTAIN INCONSISTENCIES OR OMISSIONS. IT IS NOT INTENDED FOR PUBLICATION.

Annexure B Geological Long Sections



EAST

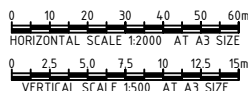
WEST



CHAINAGE (m)	17243	17300	17400	17500	17600	17700	17800	17900
TUNNEL AXIS LEVEL	22.801	22.815	22.815	22.815	22.815	22.216	19.744	16.744
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	20% SH-III; 80% SH-II		NOT APPLICABLE				50% SH-IV; 50% SH-III	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	80% SH-IV; 20% SH-III		NOT APPLICABLE				90% S3; 10% SH-V	
ESTIMATED GSI (RMR= GSI + 5)	R1: 40; R2: 46; R3: 62		R1: 37; R2: 53; R3: 68		R1: 31; R2: 54; R3: N/A		R1: 32; R2: 40; R3: N/A	
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 4°/151°; J1: N/A; J2: 60°/132°; J3: 52°/258°; J4: 55°/108°		B: 1°/173°; J1: 44°/347°; J2: 51°/165°; J3: 59°/248°; J4: 54°/066°		B: 4°/238°; J1: 57°/345°; J2: 64°/157°; J3: 57°/080°; J4: 71°/071°		B: 2°/288°; J1: TO J3; N/A; J4: 68°/056°	
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	20-24.7		4.4-29.9		NOT APPLICABLE		2	
ESTIMATED ABRASIVITY AT TUNNEL LEVEL	LOW TO MEDIUM		NOT APPLICABLE				2.8-4.9	
	LOW							

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

SCALES:



REV.	AMENDED DESCRIPTION	Design by	Verified by	Approved by	Date
C	FOR AFC STAGE APPROVAL	C.D.	V.N.	T.C.	25.11.22
B	STAGE 3 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	15.06.22
A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	25.03.22

A3 Original Co-ordinate System: MGAZone56 Height Datum: A.H.D. This sheet may be prepared using colour and may be incomplete if copied

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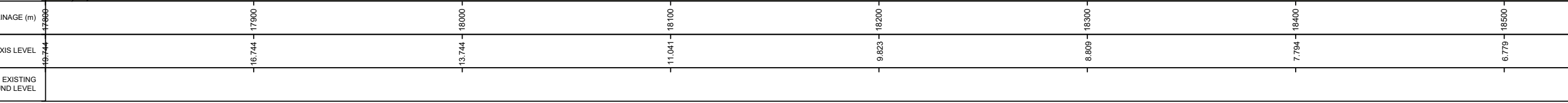
DRAWN		25.02.2022
DESIGNED		25.02.2022
DRG CHECK		25.02.2022
DESIGN CHECK		25.02.2022
APPROVED		25.02.2022

FOR STAGE APPROVAL

SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS
SBT North and SBT South

SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22700 (SOUTHBOUND)

FILE No:	SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSEG	SHEET:	01	OF	09	
STATUS:	FOR AFC STAGE APPROVAL					EDMS No:
DRG No.	SMWSASBT-CPG-SWD-SW000-GE-DRG-040323					REV C
						VER 01

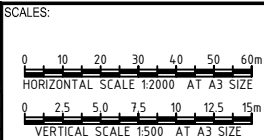


ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	50% SH-IV; 50% SH-III	100% SH-IV		10% SH-IV; 90% SH-III	40% SH-IV; 60% SH-III	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	90% S3; 10% SH-V	60% S3; 40% SH-V		70% S3; 30% SH-IV	50% S3; 20% SH-V; 30% SH-IV	
ESTIMATED GSI (RMR= GSI + 5)	R1: 38; R2: 41; R3: N/A					
DIP/DIP DIRECTION OF BEDDING, J1 TO J4 306° 7/108°	B: 4°/206°; J1: 77°/318°; J2: TO J4: N/A	TUNNEL IN R1 IS NOT STRUCTURAL CONTROLLED		B: 8°/209°; J1: 82°/349°; J2: 52°/136°; J3 & J4: N/A	B: 4°/211°; J1: N/A; J2: 69°/151°; J3 & J4: N/A	
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	2.8-4.9	1.3	1	2.9 - 12	1.8 - 4.3	
ESTIMATED ABRASIVITY AT TUNNEL LEVEL	LOW					

NOTES:

1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D	V.N	T.C	25.03.22
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APPROVED		25.02.2022

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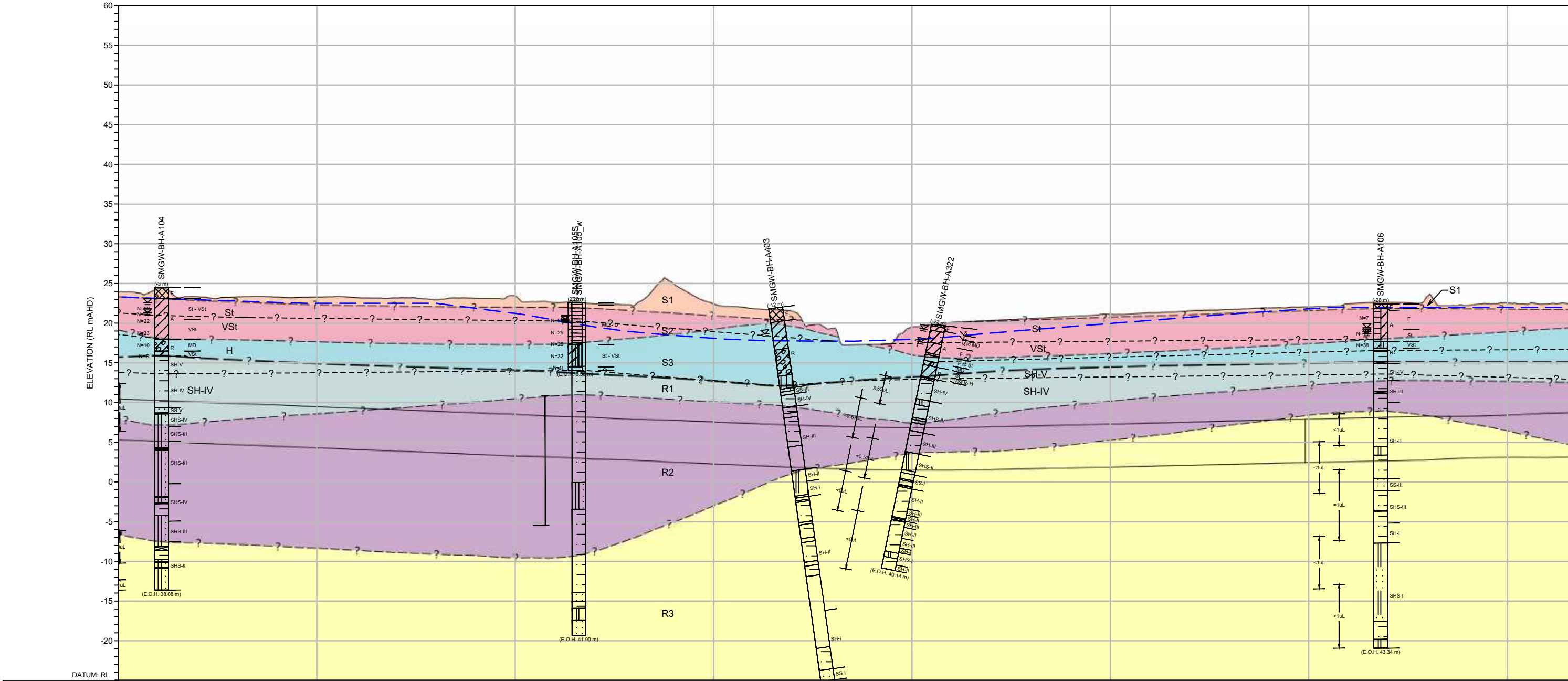
SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS
SBT North and SBT South

SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22700 (SOUTHBOUND)

FILE No: SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSEC		SHEET: 02 OF 09	0
STATUS: FOR AFC STAGE APPROVAL		EDMS No:	
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040324		REV C	VER 01

EAST

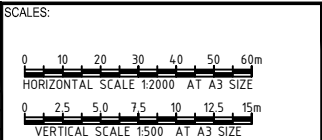
WEST



CHAINAGE (m)	18468	18500	18600	18700	18800	18900	19000	19100
TUNNEL AXIS LEVEL	7.794	6.779	5.765	4.750	4.157	4.676	5.255	5.833
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	40% SH-IV; 60% SH-III		100% SH-III			50% SH-II; 50% SH-III		20% SH-III; 80% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	50% S3; 20% SH-V; 30% SH-IV		20% S2; 30% S3; 30% SH-V; 20% SH-IV			25% S2; 25% S3; 25% SH-V; 25% SH-IV		40% S3; 20% SH-IV; 40% SH-III
ESTIMATED GSI (RMR= GSI + 5)								
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 4°/211°; J1: N/A; J2: 69°/151°; J3 & J4: N/A		B: 4°/305°; J1 TO J4: N/A		B: 1°/014°; J1: 56°/355°; J2 TO J3: N/A; J4: 40°/088°		B: 1°/199°; J1: N/A; J2: 58°/123°; J3: 62°/231°; J4: 56°/069°	
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	1.8 - 4.3		3.7 - 5.8		2.2 - 6.7			39.7 - 58.2
ESTIMATED ABRASIVITY AT TUNNEL LEVEL	LOW					LOW TO MEDIUM		

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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C	FOR AFC STAGE APPROVAL	C.D.	V.N.	T.C.	25.11.22
B	STAGE 3 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	15.06.22
A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	25.03.22
A3 Original	Co-ordinate System: MGAZone56	Height Datum: A.H.D	This sheet may be prepared using colour and may be incomplete if copied		



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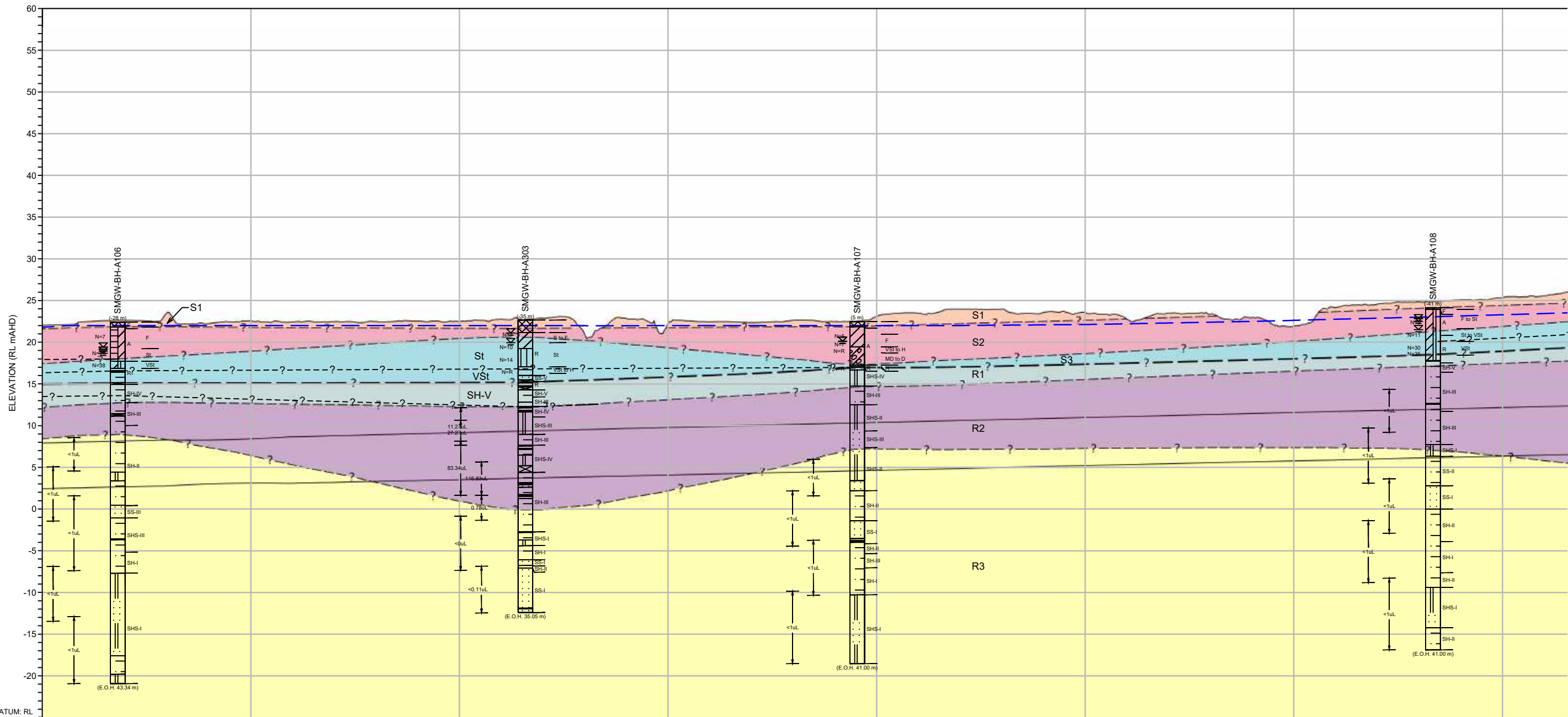
DRAWN: 25.02.2022
DESIGNED: 25.02.2022
DRG CHECK: 25.02.2022
DESIGN CHECK: 25.02.2022
APPROVED: 25.02.2022

FOR STAGE APPROVAL

SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS
SBT North and SBT South
SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22700 (SOUTHBOUND)
FILE No: SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSECH
STATUS: FOR AFC STAGE APPROVAL
EDMS No:
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040325
REV C
VER 01

NORTH-EAST

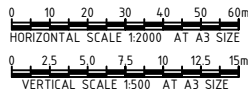
SOUTH-EAST



CHAINAGE (m)	19000	19100	19200	19300	19400	19500	19600	19700
TUNNEL AXIS LEVEL	5.235	5.833	6.412	6.990	7.569	8.147	8.726	9.304
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	20% SH-III; 80% SH-II		100% SH-III					
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	40% S3; 20% SH-IV; 40% SH-III		30% S3; 30% SH-V; 40% SH-III					
ESTIMATED GSI (RMR= GSI + 5)								
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 1°/199°; J1: N/A; J2: 58°/123°; J3: 62°/231°; J4: 56°/069°		B: 6°/083°; J1: N/A; J2: 66°/178°; J3: N/A; J4: 36°/105°		B: 2°/184°; J1: 44°/307°; J2: 48°/149°; J3: 69°/204°, J4: 35°/056°			B: 2°/162°; J1: TO J4: N/A
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	39.7 - 58.2		5.1		6.9 - 11.1			5.9 - 27
ESTIMATED ABRRASIVITY AT TUNNEL LEVEL			LOW		LOW TO MEDIUM			LOW

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

SCALES:



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C	FOR AFC STAGE APPROVAL	C.D.	V.N.	T.C.	25.11.22
B	STAGE 3 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	15.06.22
A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	25.03.22

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DESIGN CHECK		25.02.2022
APPROVED		25.02.2022

FOR STAGE APPROVAL










SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS			
SBT North and SBT South			
SBT North			
GEOTECHNICAL LONG SECTION			
CH17243 - CH22700 (SOUTHBOUND)			
FILE No:	SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSE	SHEET:	04 OF 09
STATUS: FOR AFC STAGE APPROVAL		EDMS No:	
DRG No.	SMWSASBT-CPG-SWD-SW000-GE-DRG-040326	REV	VER
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DRG No.	SMWSASBT-CPG-SWD-SW000-GE-DRG-040327	REV C	VER 01
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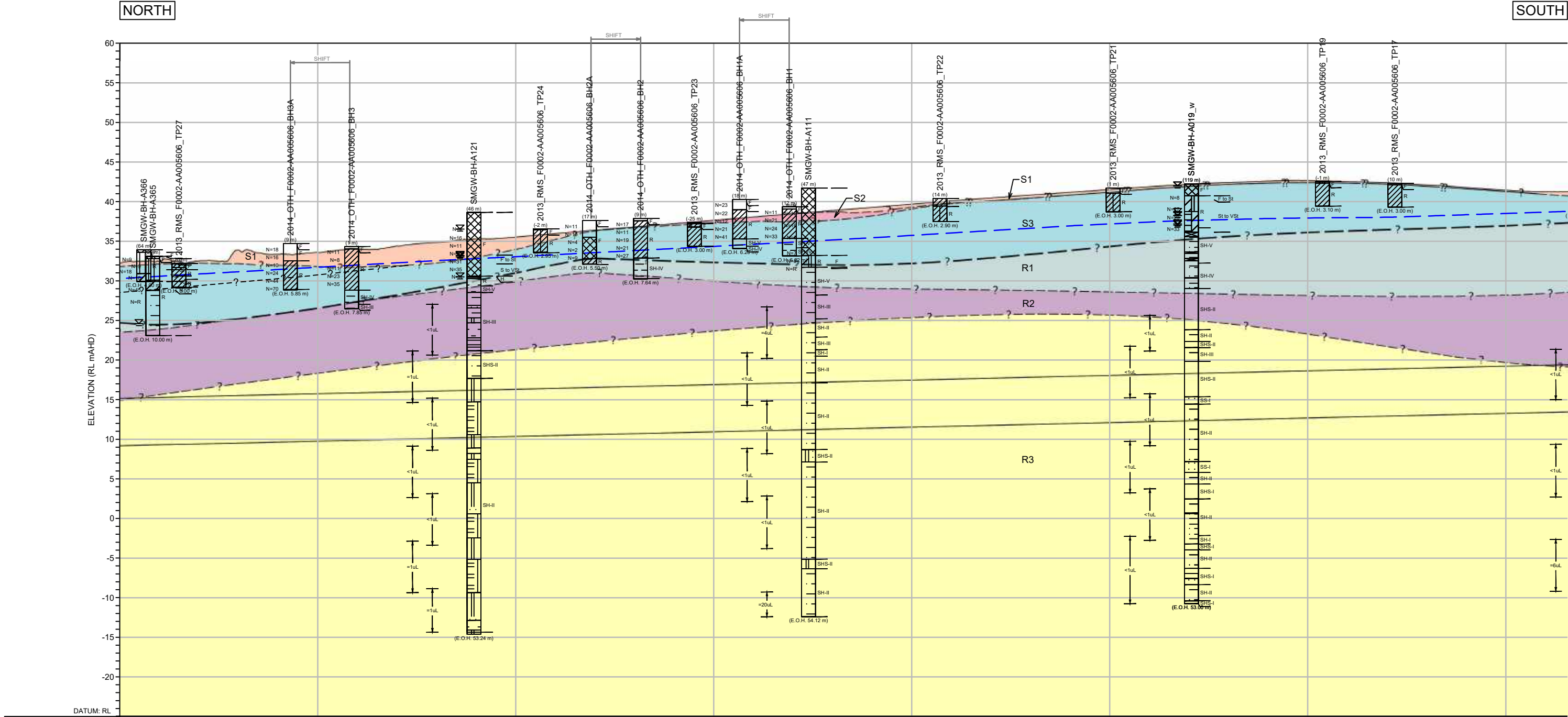
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	DESIGN CHECK		25 02 2022
	APPROVED		25 02 2022
			

FILE No:	SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSE	SHEET: 05 OF 09	0
STATUS: FOR AFC STAGE APPROVAL		EDMS No:	
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CHAINAGE (m)	12,197 - 12,299	12,775 - 20,300	13,354 - 20,400	13,932 - 20,500	14,511 - 20,600	15,089 - 20,700	15,668 - 20,800	16,246 - 20,900
TUNNEL AXIS LEVEL	12.197	12.775	13.354	13.932	14.511	15.089	15.668	16.246
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	30% S3; 70% SH-III	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II	70% SH-III; 30% SH-II
ESTIMATED GSI (RMR= GSI + 5)								
DIP/DIP DIRECTION OF BEDDING, J1 TO J4		B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 1°/157°; J1 & J2: N/A; J3: 73°/224°; J4: N/A	B: 2°/3°
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	3 - 46.2	4.1 - 14.5	4.1 - 14.5	7.7 - 10.4	7.7 - 10.4	7.7 - 10.4	7.7 - 10.4	7.7 - 10.4
ESTIMATED ABRASIVITY AT TUNNEL LEVEL	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM	LOW TO MEDIUM

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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NOTE: Do not scale from this drawing.

CLIENT

SYDNEY METRO

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DRAWN 25.02.2022

DESIGNED 25.02.2022

DRG CHECK 25.02.2022

DESIGN CHECK 25.02.2022

APPROVED 25.02.2022

FOR STAGE APPROVAL

SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS

SBT North and SBT South

SBT North

GEOTECHNICAL LONG SECTION

CH17243 - CH22700 (SOUTHBOUND)

FILE No: SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSECT

STATUS: FOR AFC STAGE APPROVAL

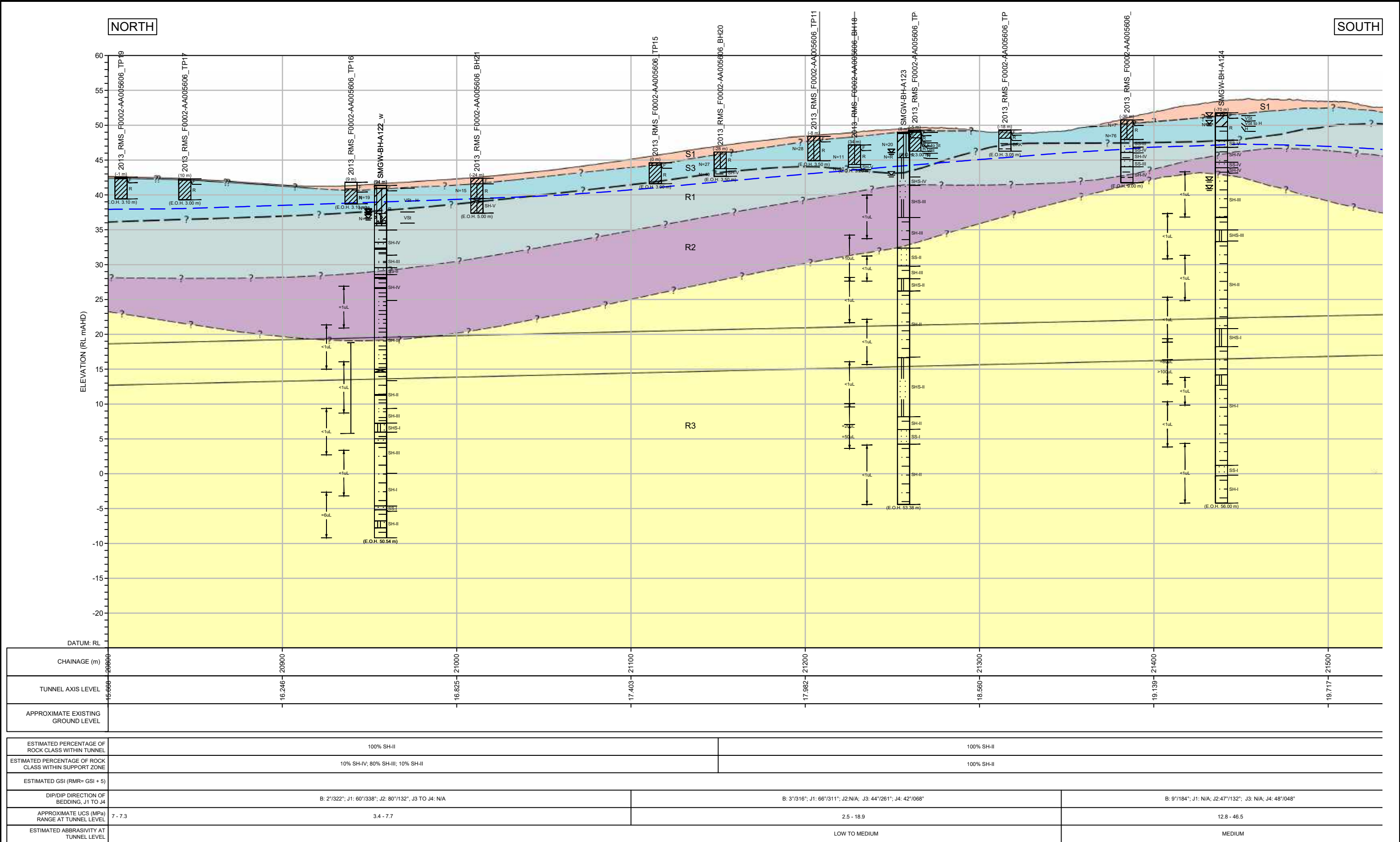
EDMS No:

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040328

REV C

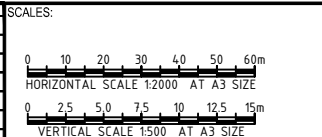
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NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	AMENDED DESCRIPTION	Design by	Verified by	Approved by	Date
C	FOR AFC STAGE APPROVAL	C.D.	V.N.	T.C.	25.11.22
B	STAGE 3 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	15.06.22
A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	25.03.22

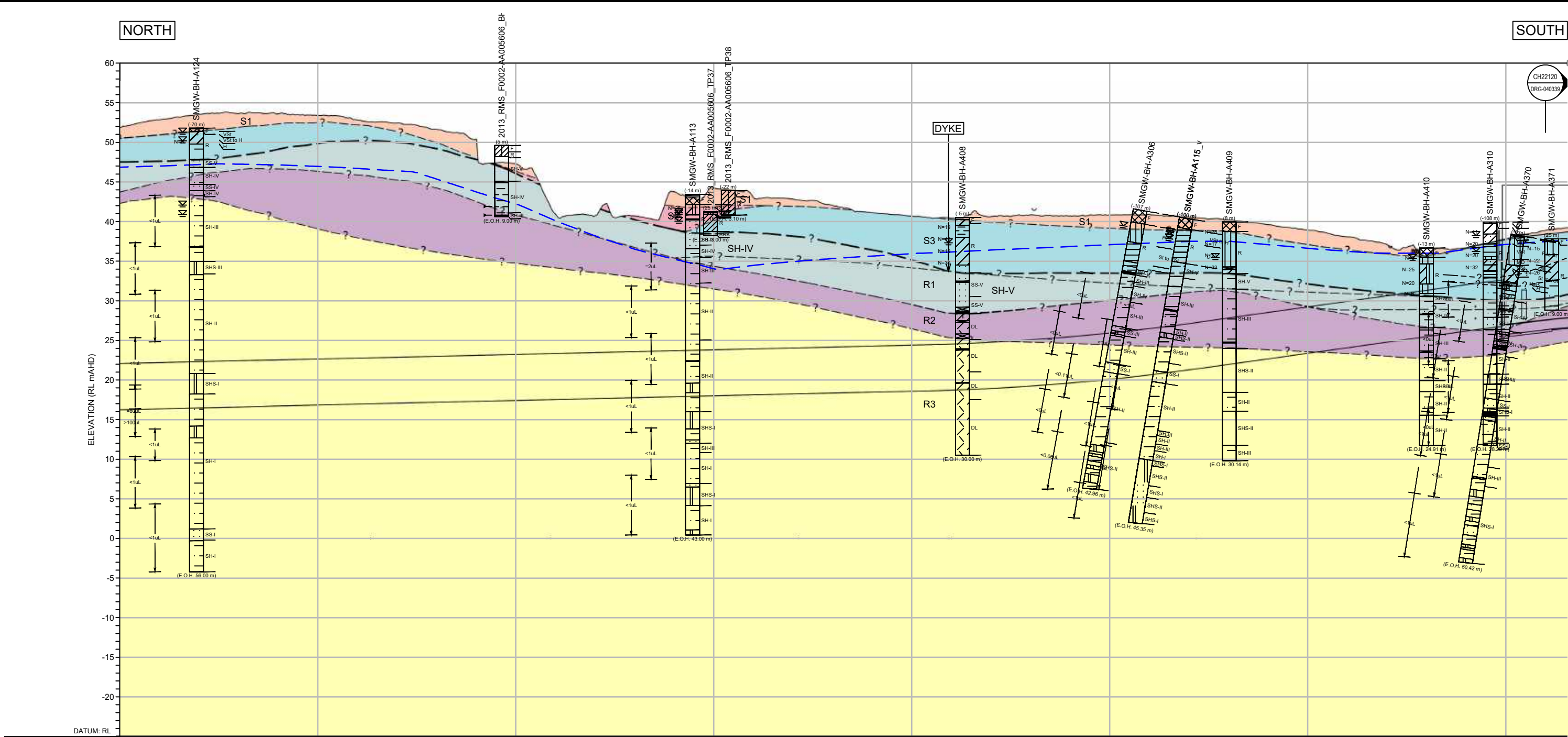


CLIENT	NSW GOVERNMENT	sydney METRO
SYDNEY METRO		

THE INFORMATION SHOWN ON THIS DRAWING IS FOR THE PURPOSES OF THE SYDNEY METRO PROJECT ONLY. NO WARRANTY IS GIVEN OR IMPLIED AS TO ITS SUITABILITY FOR ANY OTHER PURPOSE. THE SERVICE PROVIDERS ACCEPT NO LIABILITY ARISING FROM THE USE OF THIS DRAWING AND THE INFORMATION SHOWN THEREON FOR ANY PURPOSE OTHER THAN THE SYDNEY METRO PROJECT.	
DRAWN	25.02.2022
DESIGNED	25.02.2022
DRG CHECK	25.02.2022
DESIGN CHECK	25.02.2022
APPROVED	25.02.2022

FOR STAGE APPROVAL			
SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS			
SBT North and SBT South			
SBT North			
GEOTECHNICAL LONG SECTION			
CH17243 - CH22700 (SOUTHBOUND)			
FILE No:	SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSECT	SHEET:	07 OF 09
STATUS: FOR AFC STAGE APPROVAL		EDMS No:	
DRG No.	SMWSASBT-CPG-SWD-SW000-GE-DRG-040329	REV	VER
		C	01

Plot Date: 28/11/22 - 15:02 Cad File: \\tt.local\cd\779\F1_1_Progect\4_SVD-GEOTECHNICS\13_SVDGE290000\SYDGE292575 WSA SBT04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG-NORTH_LSECT_C.dwg



CHAINAGE (m)	19,139 - 21,469	19,717 - 21,500	20,296 - 21,600	20,874 - 21,700	21,453 - 21,800	22,894 - 21,900	26,144 - 22,000	29,610 - 22,000
TUNNEL AXIS LEVEL	19.139	19.717	20.296	20.874	21.453	22.894	26.144	29.610
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II		100% SH-II		100% SH-II		50% SH-III; 50% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% SH-II		50% SH-III; 50% SH-II		30% S3; 40% SH-IV; 30% SH-III		30% S3; 50% SH-IV; 20% SH-III	
ESTIMATED GSI (RMR= GSI + 5)								
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 9°/184°; J1: N/A; J2: 47°/132°; J3: N/A; J4: 48°/048°		B: 6°/239°; J1 TO J4: N/A		B: 3°/129°; J1 TO J4: N/A		B: 4°/203°; J1: N/A; J2: 80°/160°; J3: 85°/127°; J4: N/A	
APPROXIMATE UCS (MPa) RANGE AT TUNNEL LEVEL	12.8 - 46.5		7.6 - 13.7		1.9 - 2.3		1.3	
ESTIMATED ABRASIVITY AT TUNNEL LEVEL	MEDIUM		LOW TO MEDIUM		LOW TO MEDIUM		LOW	

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	AMENDED DESCRIPTION	Design by	Verified by	Approved by	Date
C	FOR AFC STAGE APPROVAL	C.D.	V.N.	T.C.	25.11.22
B	STAGE 3 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	15.06.22
A	STAGE 1 & 2 EXTERNAL SUBMISSION	C.D.	V.N.	T.C.	25.03.22
A3 Original Co-ordinate System: MGAZone56 Height Datum: A.H.D. This sheet may be prepared using colour and may be incomplete if copied					

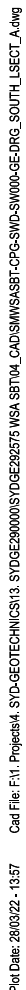
CLIENT	NSW GOVERNMENT sydney METRO
SYDNEY METRO	

NOTES:	The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.
DESIGNED	25.02.2022
DRG CHECK	25.02.2022
DESIGN CHECK	25.02.2022
APPROVED	25.02.2022

FOR STAGE APPROVAL

SYDNEY METRO - WESTERN SYDNEY AIRPORT - STATION BOXES AND TUNNELLING WORKS	SBT North and SBT South
SBT North	GEOTECHNICAL LONG SECTION
CH17243 - CH22700 (SOUTHBOUND)	FILE No: SMWSASBT-CPG-SWD-SW000-GE-DRG-NTH-LSECT SHEET: 08 OF 09
STATUS: FOR AFC STAGE APPROVAL	EDMS No: DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040330
REV	C
VER	01

SOUTH



100mm AT FULL SIZE

A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN
REV.	BY	DATE	DESCRIPTION	APPD.



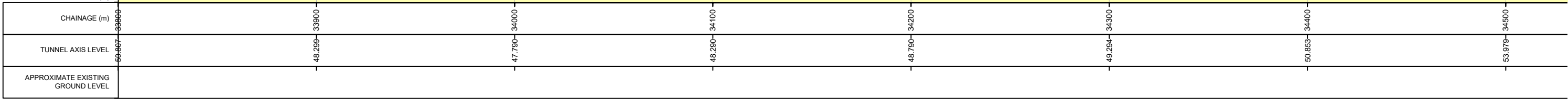
SERVICE PROVIDERS



GEODATA
BG & E
Tetra Tech Coffey
Robert and Group
ARCADIS

STATUS: FOR INFORMATION		SHEET 01 OF 11	
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040366			REV. A

SOUTH



NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305
FOR GENERAL NOTES AND LEGENDS.

SCALES

0 10 20 30 40 50 60m
SCALE 1:2000 AT A3 SIZE

0 2.5 5.0 7.5 10 12.5 15m
SCALE 1:500 AT A3 SIZE

NOTE: Do not scale from this drawing.

CLIENT



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SERVICE PROVIDERS

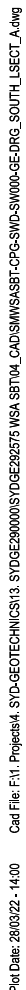


DRAWN	[REDACTED]	25 Feb 2022
DESIGNED	[REDACTED]	25 Feb 2022
DRG CHECK	[REDACTED]	25 Feb 2022
DESIGN CHECK	[REDACTED]	25 Feb 2022
APPROVED	[REDACTED]	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION		SHEET 02 OF 11	©
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040367			REV. A

SOUTH



100mm AT FULL SIZE

Sydney Metro Western Sydney Airport SBT
 SBT North and SBT South
 SBT South
 GEOTECHNICAL LONG SECTION
 CH33200 - CH39850 (SOUTHBOUND)

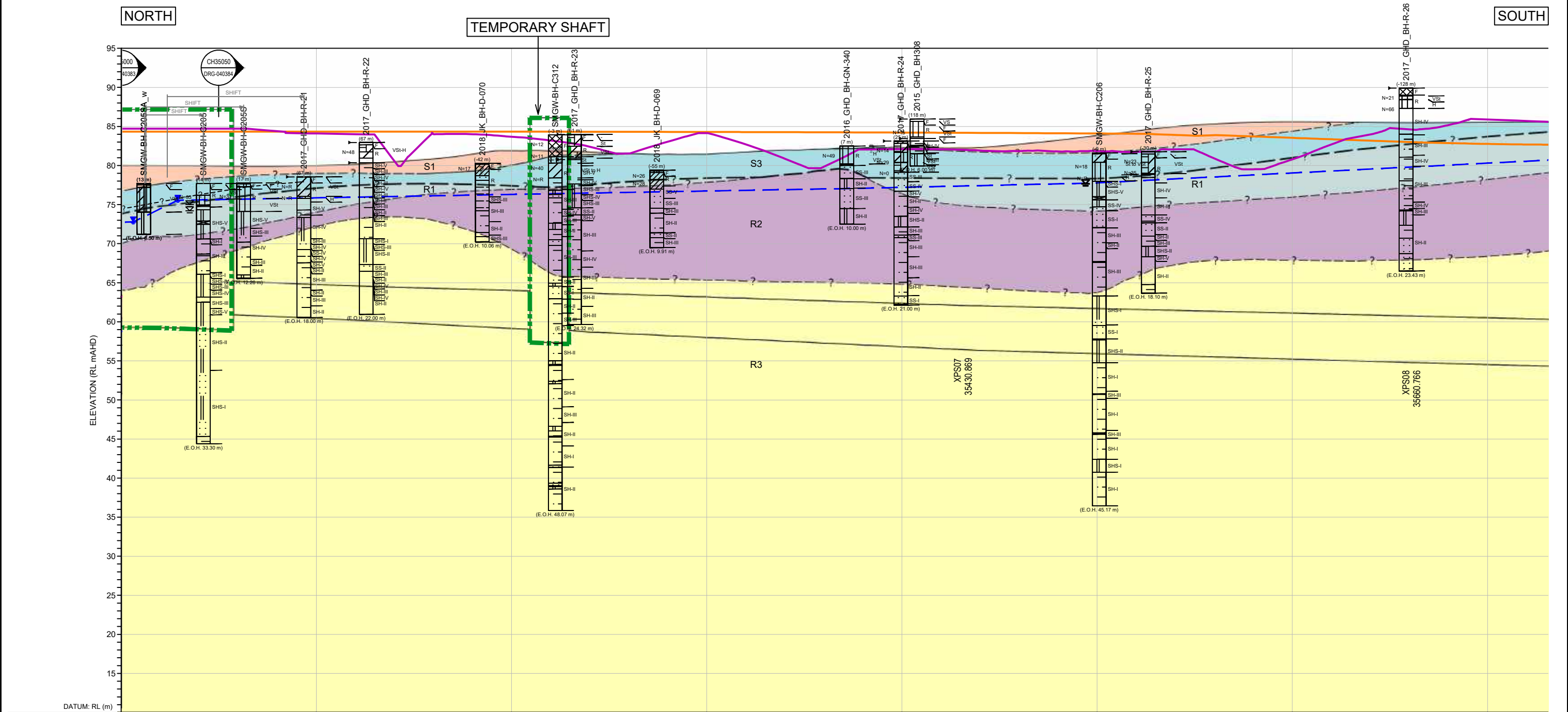
STATUS: FOR INFORMATION	SHEET 03 OF 11	
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DRG No: SMWASBT-CPG-SWD-SW000-GE-DRG-040368	REV.	A
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Plot Date: 28/03/22 - 14:02 Cad File: F:\1. Projects\4. SYD-GEOTECH\CH3320 - CH39850\SYDGE22000\SYDGE22075 WSA SBT04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg

100mm AT FULL SIZE

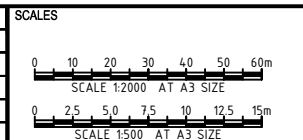
100mm AT FULL SIZE



CHAINAGE (m)	34900 - 35600			
TUNNEL AXIS LEVEL	62.527 - 57.711			
APPROXIMATE EXISTING GROUND LEVEL				
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II		100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	20% SH-V; 30% SH-III; 50% SH-II		90% SH-III; 10% SH-II	
ESTIMATED GSI				
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 4°/016°; J1: 60°/007°; J2: 63°/189°; J3 & J4: N/A		B: 8°/013°; J1: 58°/320°; J2: 52°/120°; J3 & J4: N/A	
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN
A3 Original	Co-ordinate System: Zone 56		Height Datum: A.H.D.	This sheet may be prepared using colour and may be incomplete if copied



NOTE: Do not scale from this drawing.	ALT. DRG No. Alternate Document Number
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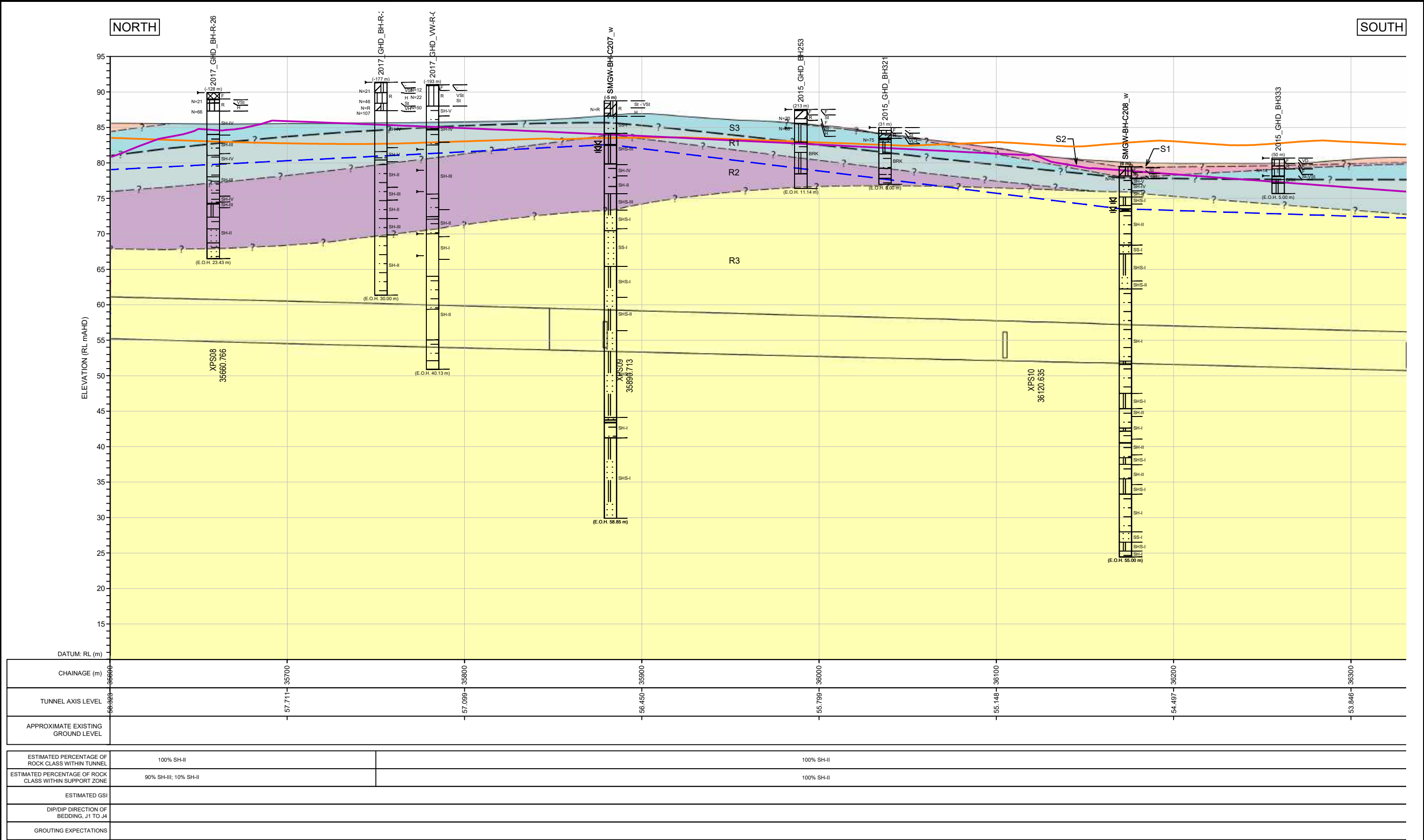


SERVICE PROVIDERS	
GEODATA	DRAWN: 25 Feb 2022
BC & E	DESIGNED: 25 Feb 2022
TETRA TECH	DRG CHECK: 25 Feb 2022
ARCADIS	DESIGN CHECK: 25 Feb 2022
	APPROVED: 25 Feb 2022

Sydney Metro Western Sydney Airport SBT	
SBT North and SBT South	
SBT South	
GEOTECHNICAL LONG SECTION	
CH33200 - CH39850 (SOUTHBOUND)	
STATUS: FOR INFORMATION	SHEET 04 OF 11
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040369	REV. A

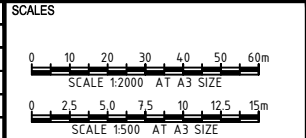
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100mm AT FULL SIZE



NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN
A3 Original			Co-ordinate System: Zone 56	
			Height Datum: A.H.D.	
			This sheet may be prepared using colour and may be incomplete if copied	



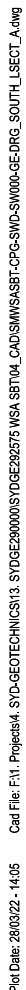
NOTE:	Do not scale from this drawing.	ALT. DRG No.	Alternate Document Number
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SERVICE PROVIDERS	
DRAWN	25 Feb 2022
DESIGNED	25 Feb 2022
DRG CHECK	25 Feb 2022
DESIGN CHECK	25 Feb 2022
APPROVED	25 Feb 2022

Sydney Metro Western Sydney Airport SBT	
SBT North and SBT South	
SBT South	
GEOTECHNICAL LONG SECTION	
CH33200 - CH39850 (SOUTHBOUND)	
STATUS: FOR INFORMATION	SHEET 05 OF 11
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040370	REV. A

SOUTH














100mm AT FULL SIZE

A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN
REV.	BY	DATE	DESCRIPTION	APPD.



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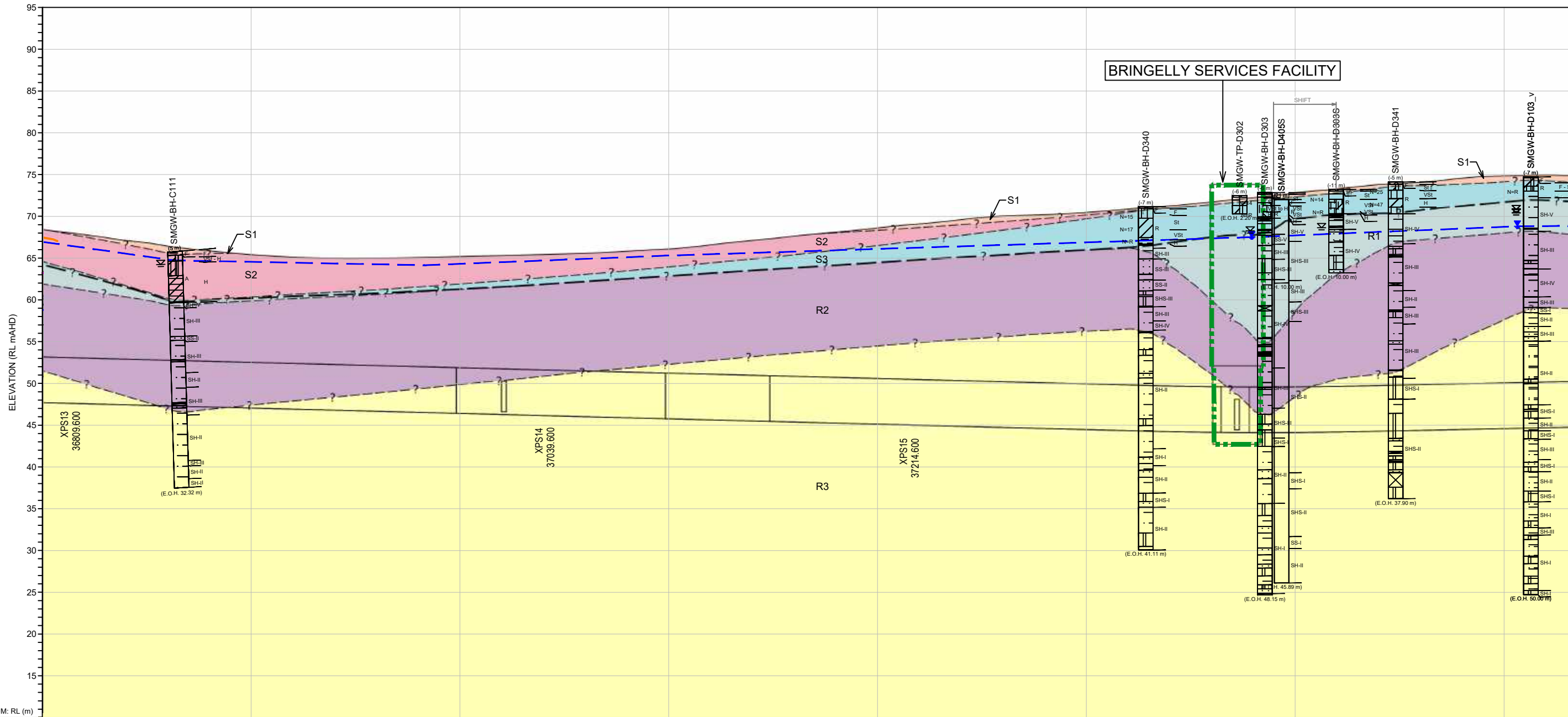
SERVICE PROVIDERS

	DRAWN 	25 Feb 2022
	DESIGNED 	25 Feb 2022
	DRG CHECK 	25 Feb 2022
	DESIGN CHECK 	25 Feb 2022
	APPROVED 	25 Feb 2022
		

Sydney Metro Western Sydney Airport SBT SBT North and SBT South SBT South GEOTECHNICAL LONG SECTION CH33200 - CH39850 (SOUTHBOUND)			
STATUS: FOR INFORMATION		SHEET 06 OF 11	©
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040371		REV.	A

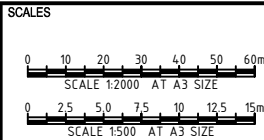
NORTH

SOUTH



CHAINAGE (m)	36800 - 36900				36900 - 37000				37000 - 37100				37100 - 37200				37200 - 37300				37300 - 37400				37400 - 37500			
TUNNEL AXIS LEVEL	49.592				49.941				49.290				48.639				47.989				47.338				46.890			
APPROXIMATE EXISTING GROUND LEVEL																												
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-III				100% SH-II				100% SH-II				100% SH-II				100% SH-II				100% SH-II							
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	30% S2; 70% SH-III				100% SH-III				50% SH-III; 50% SH-II				100% SH-III															
ESTIMATED GSI																					R1: 46; R2: 55; R3: 67							
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 3°/355°; J1: 69°/011°; J2: 51°/127°; J3: 81°/219°; J4: 69°/057°								PENDING BY NEW ATV												B: 12°/002°; J1: 81°/010°; J2 TO J4: N/A							
GROUTING EXPECTATIONS																												

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.



REV.	BY	DATE	DESCRIPTION	APPD.
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NOTE: Do not scale from this drawing.

ALT. DRG No. Alternate Document Number

CLIENT



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DESIGNED		25 Feb 2022
DRG CHECK		25 Feb 2022
DESIGN CHECK		25 Feb 2022
APPROVED		25 Feb 2022

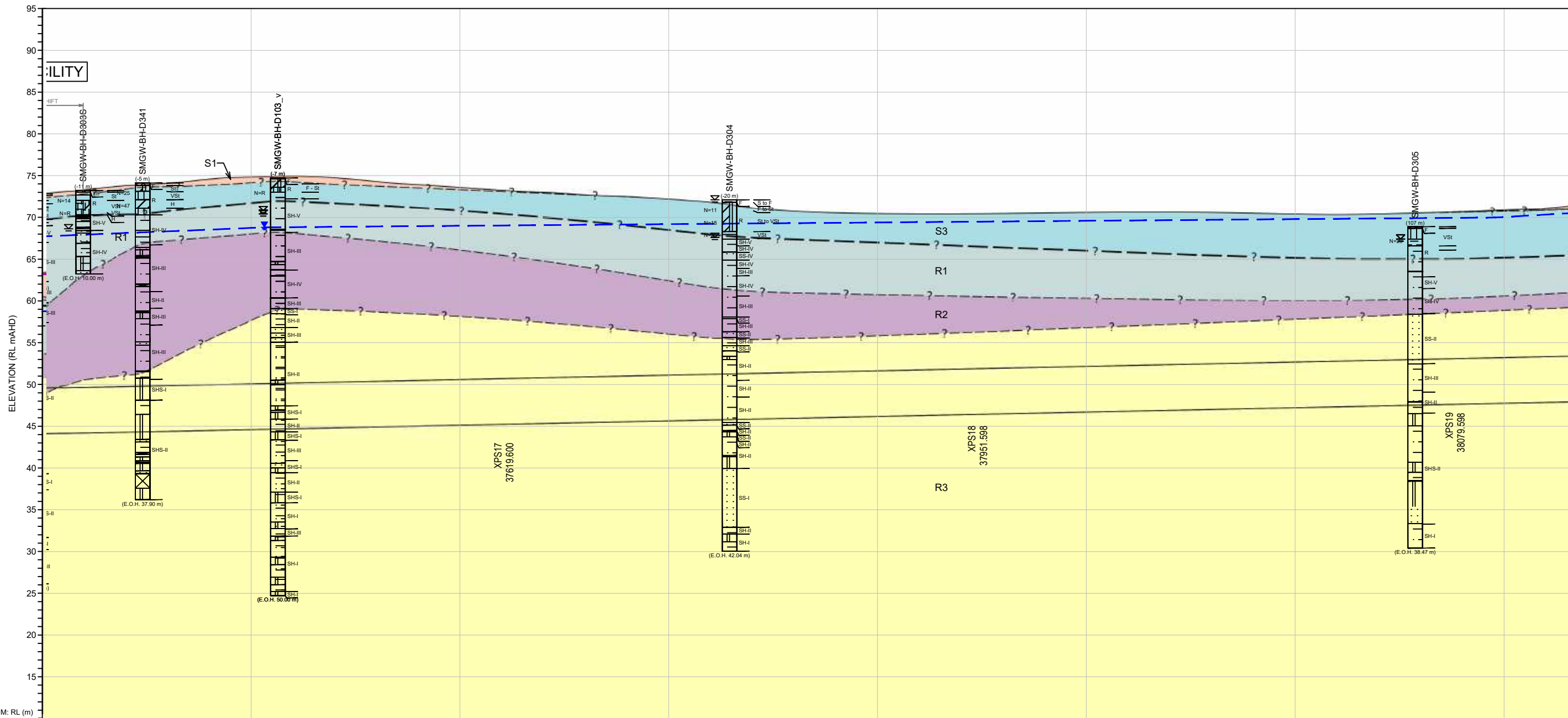
Sydney Metro Western Sydney Airport SBT

SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION	SHEET 07 OF 11	©
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040372	REV. A	

NORTH

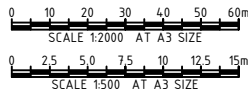
SOUTH



CHAINAGE (m)	37400	37500	37600	37700	37800	37900	38000	38100
TUNNEL AXIS LEVEL	46.990	47.315	47.840	48.365	48.890	49.415	49.940	50.465
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% SH-III	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II	50% SH-III; 50% SH-II
ESTIMATED GSI	R1: 46; R2: 55; R3: 67							
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 12°/002°; J1: 81°/010°; J2 TO J4: N/A	B: 7°/145°; J1: 49°/339°; J2: N/A; J3: 74°/248°; J4: 49°/095°						
GROUTING EXPECTATIONS								

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

SCALES



REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN
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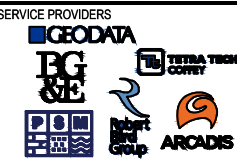
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ALT. DRG No. Alternate Document Number

CLIENT



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DRAWN		25 Feb 2022
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DRG CHECK		25 Feb 2022
DESIGN CHECK		25 Feb 2022
APPROVED		25 Feb 2022

Sydney Metro Western Sydney Airport SBT

SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION

SHEET 08 OF 11

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040373

REV. A

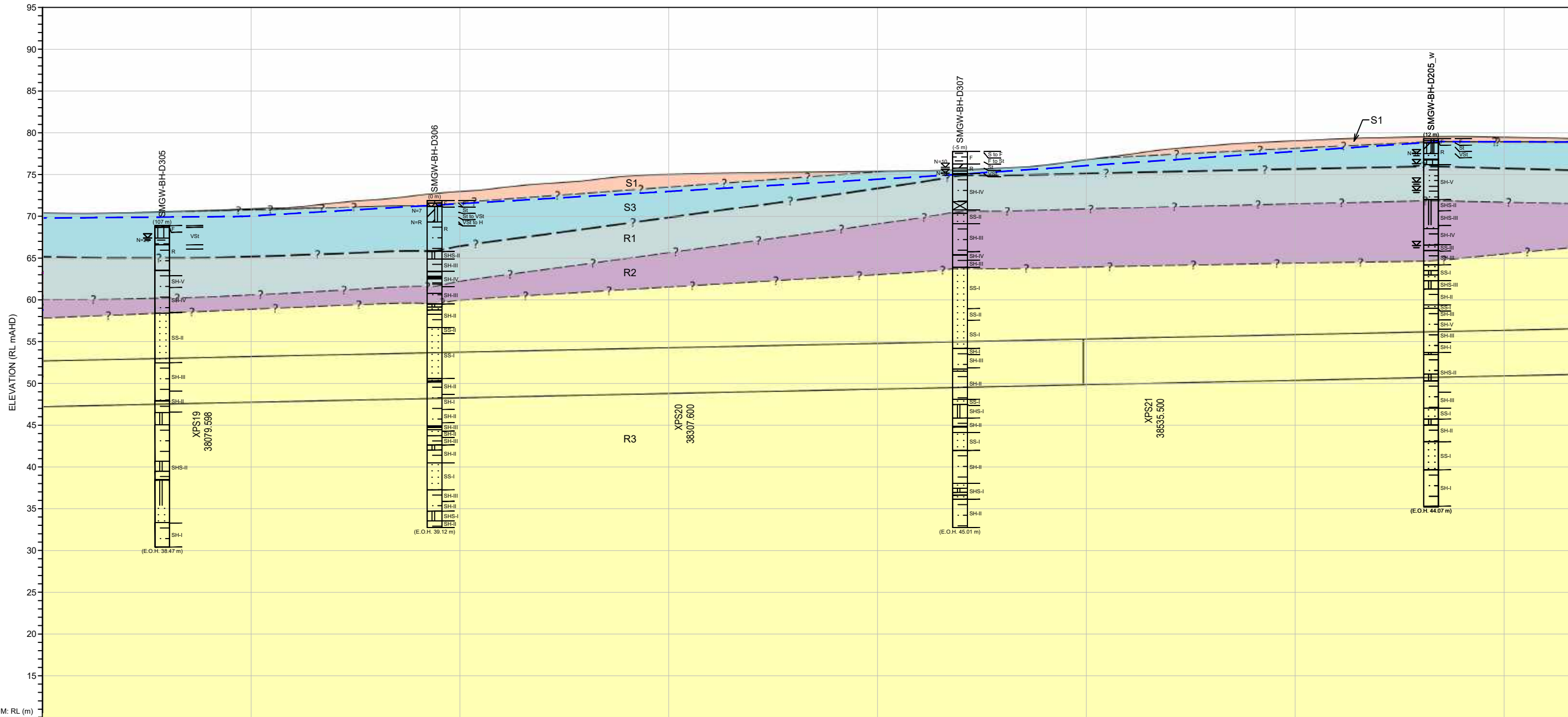
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100mm AT FULL SIZE

100mm AT FULL SIZE

NORTH

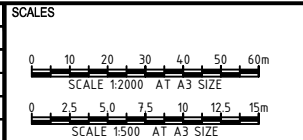
SOUTH



CHAINAGE (m)	38000	38100	38200	38300	38400	38500	38600	38700
TUNNEL AXIS LEVEL	49.940	50.465	50.990	51.515	52.040	52.565	53.090	53.615
APPROXIMATE EXISTING GROUND LEVEL								
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II			100% SH-II			100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	30% SH-V; 30% SH-III; 40% SH-II			40% SH-III; 60% SH-II			40% SH-III; 60% SH-II	
ESTIMATED GSI								
DIP/DIP DIRECTION OF BEDDING, J1 TO J4								
GROUTING EXPECTATIONS								

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN	
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NOTE: Do not scale from this drawing.		ALT. DRG No.	Alternate Document Number
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CPB CONTRACTORS

Geotek

SERVICE PROVIDERS

GEODATA

BC & E

TETRA TECH

ARCADIS

DRG GROUP

DRAWN _____ 25 Feb 2022

DESIGNED _____ 25 Feb 2022

DRG CHECK _____ 25 Feb 2022

DESIGN CHECK _____ 25 Feb 2022

APPROVED _____ 25 Feb 2022

Sydney Metro Western Sydney Airport SBT

SBT North and SBT South

SBT South

GEOTECHNICAL LONG SECTION

CH33200 - CH39850 (SOUTHBOUND)

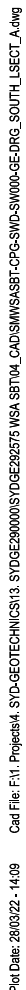
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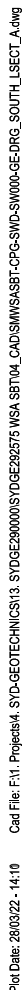
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REV. A

SOUTH

100mm AT FULL SIZE

Sydney Metro Western Sydney Airport SBT SBT North and SBT South SBT South GEOTECHNICAL LONG SECTION CH33200 - CH39850 (SOUTHBOUND)		
STATUS: FOR INFORMATION	SHEET 10 OF 11	
DRG No: SMWASABT-CPG-SWD-SW000-GE-DRG-040375	REV. A	

100mm AT FULL SIZE







SCALES

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SCALE 1:500 AT A3 SIZE

NOTE: Do not scale from this drawing. ALT. DRG No. Alternate Document Number

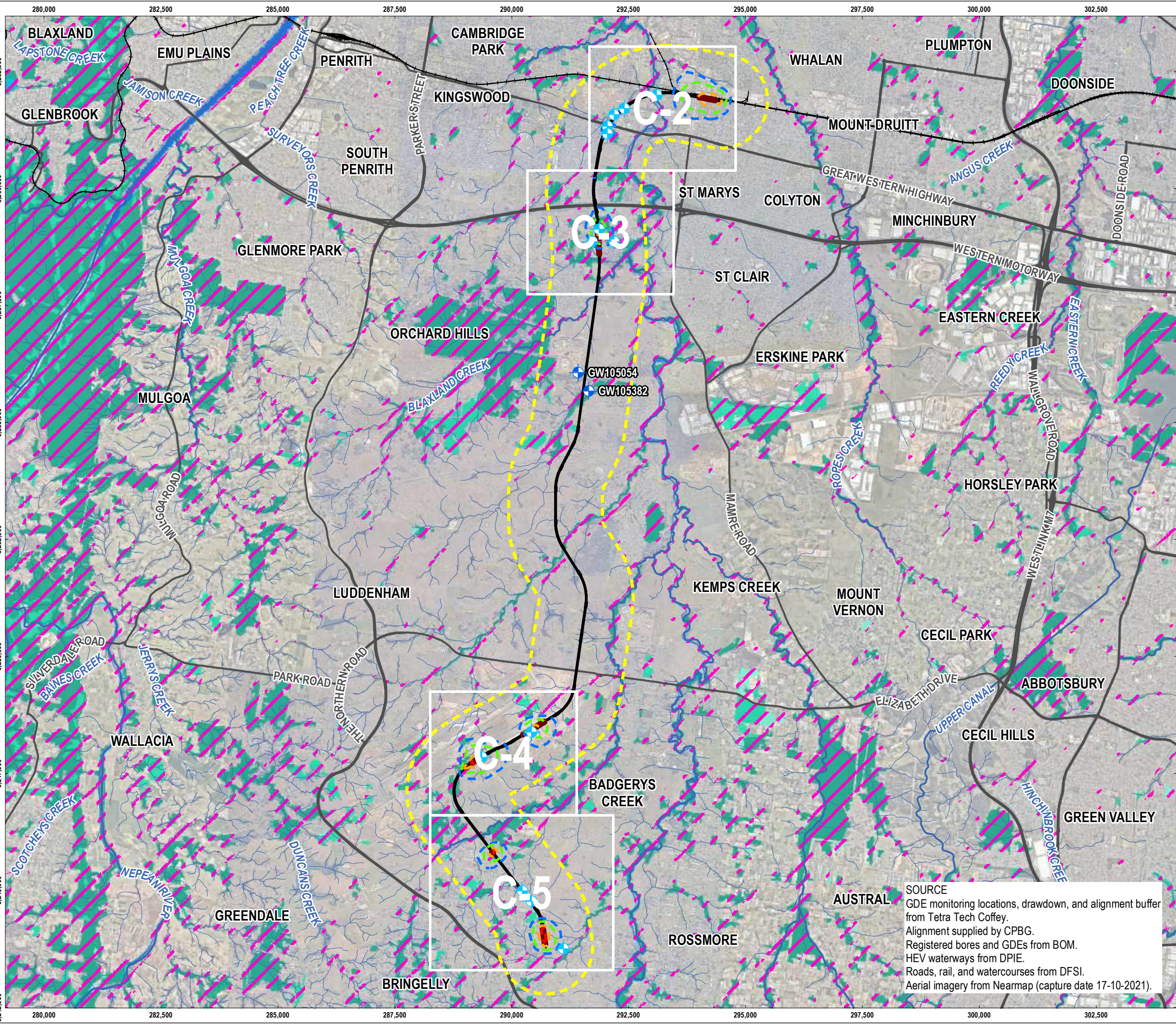


SERVICE PROVIDERS			
			
			
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DESIGNED _____	_____	_____	<u>25 Feb 2022</u>
DRG CHECK _____	_____	_____	<u>25 Feb 2022</u>
DESIGN CHECK _____	_____	_____	<u>25 Feb 2022</u>
APPROVED _____	_____	_____	<u>25 Feb 2022</u>

STATUS: FOR INFORMATION		SHEET 11 OF 11	©
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Annexure C Groundwater Dependent Ecosystem Summary and Figures





LEGEND

- Registered Bore - Industrial / Commercial
- GDE Monitoring Location
- Existing
- Project Alignment
- Project Alignment Structure
- Railway
- Major Road
- Perennial Watercourse
- Non-perennial Watercourse
- Project Alignment Buffer (1 km)
- High Ecological Value Waterways
- Predicted Groundwater Drawdown
 - 1 m
 - 2 m
 - 5 m
 - 10 m
- Aquatic GDE
 - Unclassified Potential GDE - from regional studies
 - High Potential GDE - from national assessment
 - Moderate Potential GDE - from national assessment
 - Low Potential GDE - from national assessment
- Terrestrial GDE
 - High Potential GDE - from national assessment
 - Moderate Potential GDE - from national assessment
 - Low Potential GDE - from national assessment



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PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

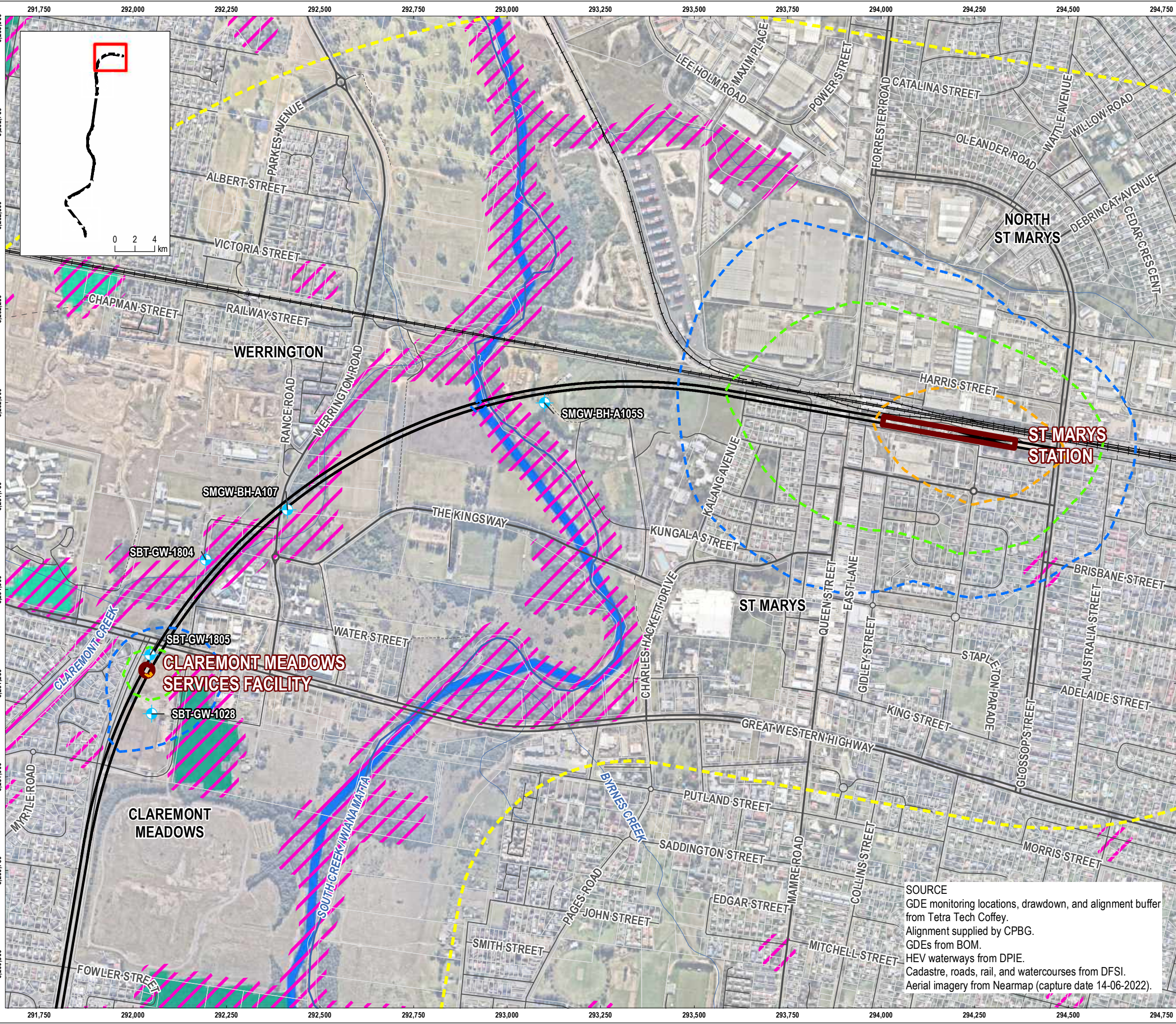
FIGURE C-1

Groundwater Receptors and Sensitive Areas
Groundwater Monitoring Plan



DATE: 30.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_C_FC-1_GIS_REV0

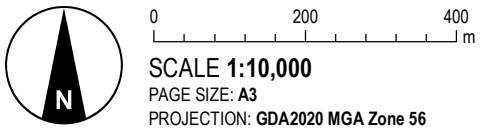
SOURCE
GDE monitoring locations, drawdown, and alignment buffer
from Tetra Tech Coffey.
Alignment supplied by CPBG.
Registered bores and GDEs from BOM.
HEV waterways from DPIE.
Roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).



SOURCE
GDE monitoring locations, drawdown, and alignment buffer
from Tetra Tech Coffey.
Alignment supplied by CPBG.
GDEs from BOM.
HEV waterways from DPIE.
Cadastre, roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



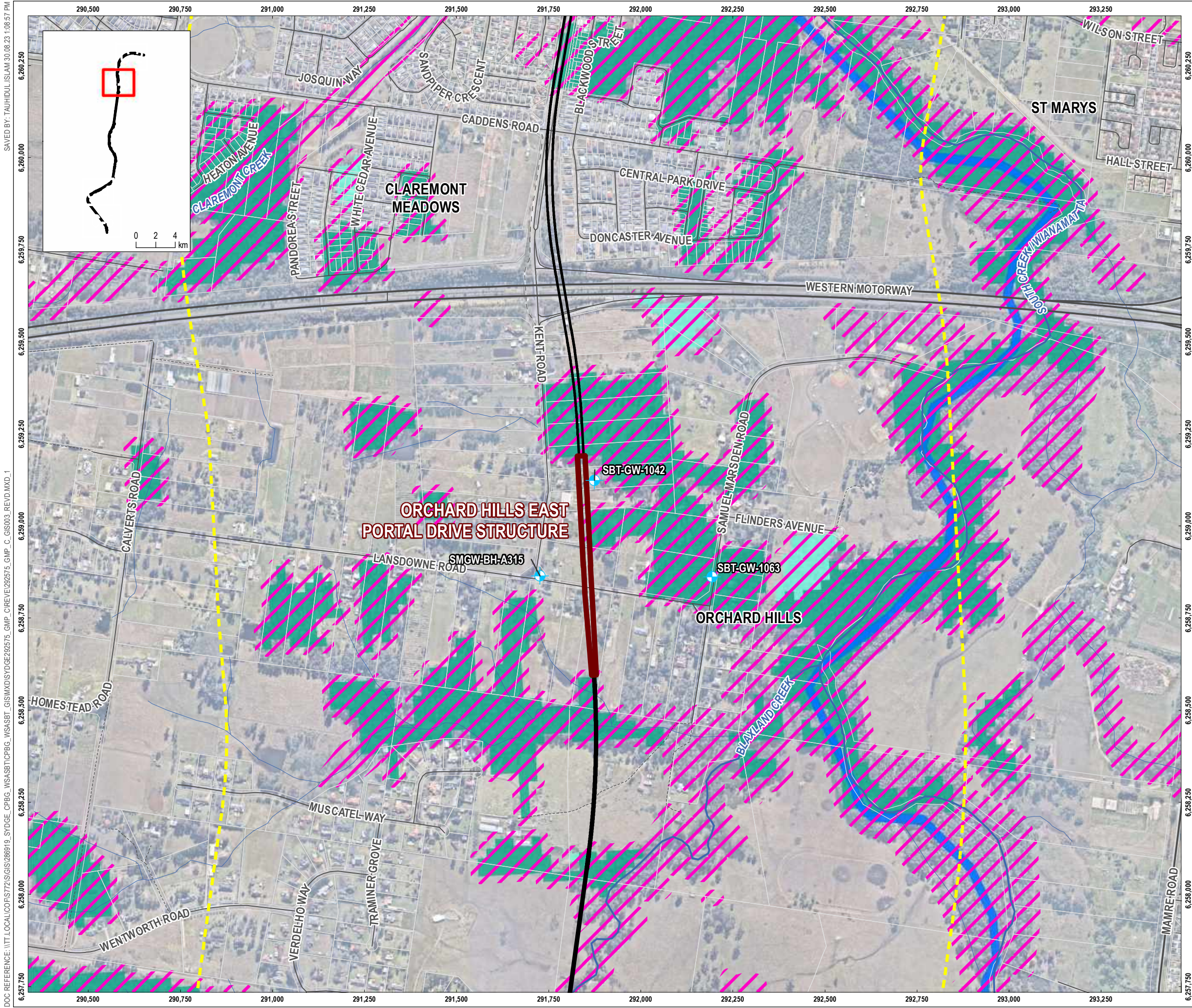
- LEGEND**
- GDE Monitoring Location
- Existing
- Project Alignment
- Project Alignment Structure
- Railway
- Major Road
 - Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
- High Ecological Value Waterways
- Predicted Groundwater Drawdown
- 1 m
 - 2 m
 - 5 m
- Aquatic GDE
- High Potential GDE - from national assessment
- Terrestrial GDE
- High Potential GDE - from national assessment
 - Moderate Potential GDE - from national assessment



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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE C-2
Groundwater Receptors and Sensitive Areas
Groundwater Monitoring Plan

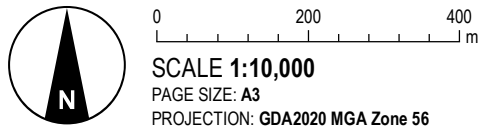




LEGEND

- GDE Monitoring Location
 - Existing
- Project Alignment
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
- High Ecological Value Waterways
- Predicted Groundwater Drawdown
 - 1 m
 - 2 m
 - 5 m
- Aquatic GDE
 - High Potential GDE - from national assessment
- Terrestrial GDE
 - High Potential GDE - from national assessment
 - Low Potential GDE - from national assessment

SOURCE
Drawdown and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
GDEs from BOM.
HEV waterways from DPIE.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

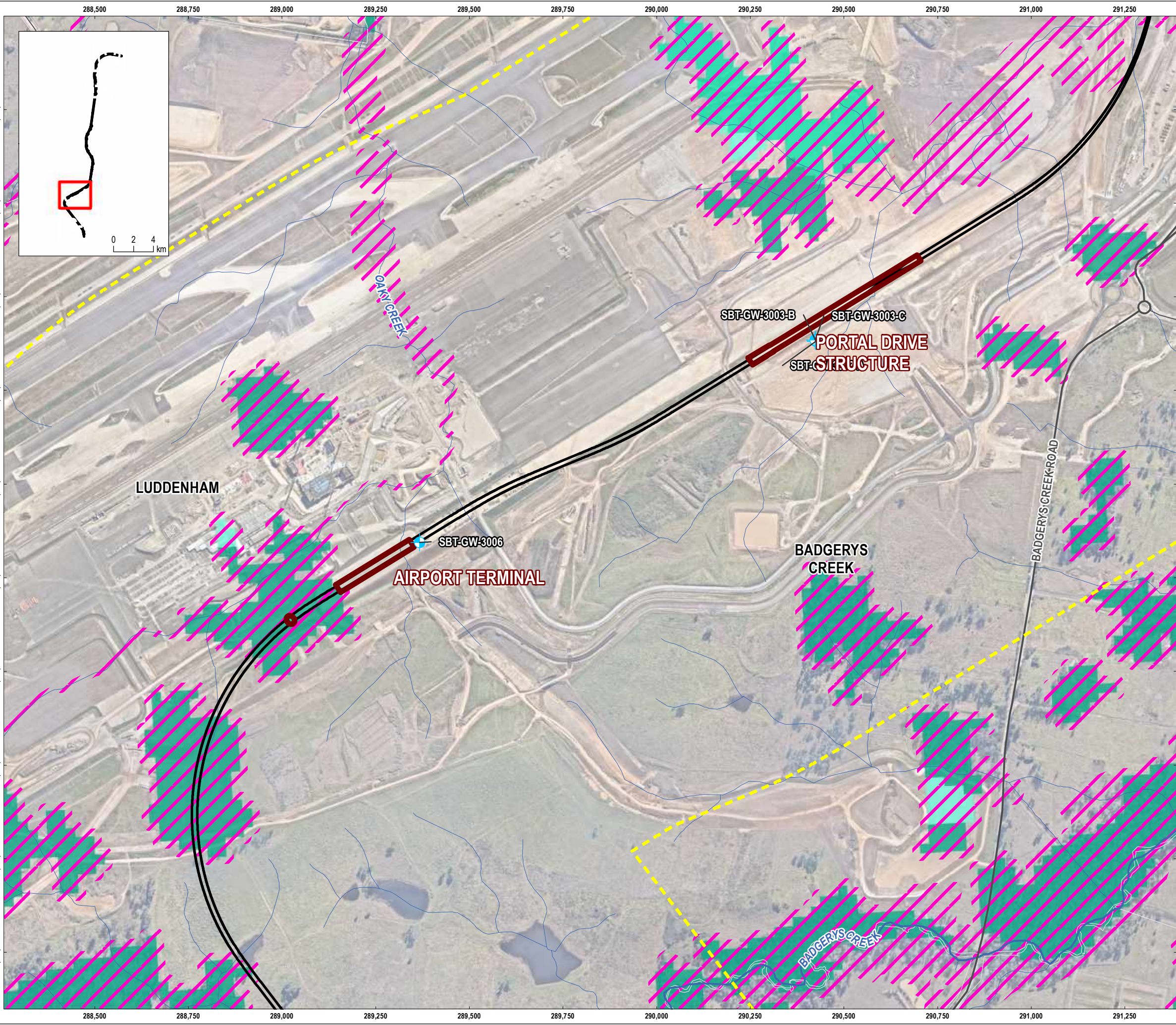


CPB - GHELLA
WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE C-3
Groundwater Receptors and Sensitive Areas
Groundwater Monitoring Plan



DOC REFERENCE: \\TIT.LOCAL\OFS772\GIS\288919_SYDGE_CPBG_WSASBT_GIS\MXD\SYDGE292575_GMP_C_GIS004_REV0.MXD_1
SAVED BY: TAUHIDUL ISLAM 30.08.23 1:11:12 PM

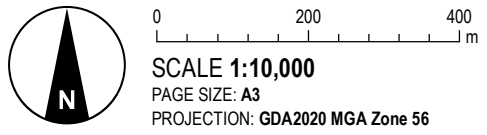


LEGEND

- GDE Monitoring Location
- Existing
- Project Alignment
- Project Alignment Structure
 - Major Road
 - Minor Road
- Watercourse
- Perennial Watercourse
 - Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
 - High Ecological Value Waterways
- Predicted Groundwater Drawdown
- 1 m
 - 2 m
 - 5 m
 - 10 m
- Terrestrial GDE
- High Potential GDE - from national assessment
 - Moderate Potential GDE - from national assessment
 - Low Potential GDE - from national assessment

SOURCE

Drawdown and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
GDEs from BOM.
HEV waterways from DPIE.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

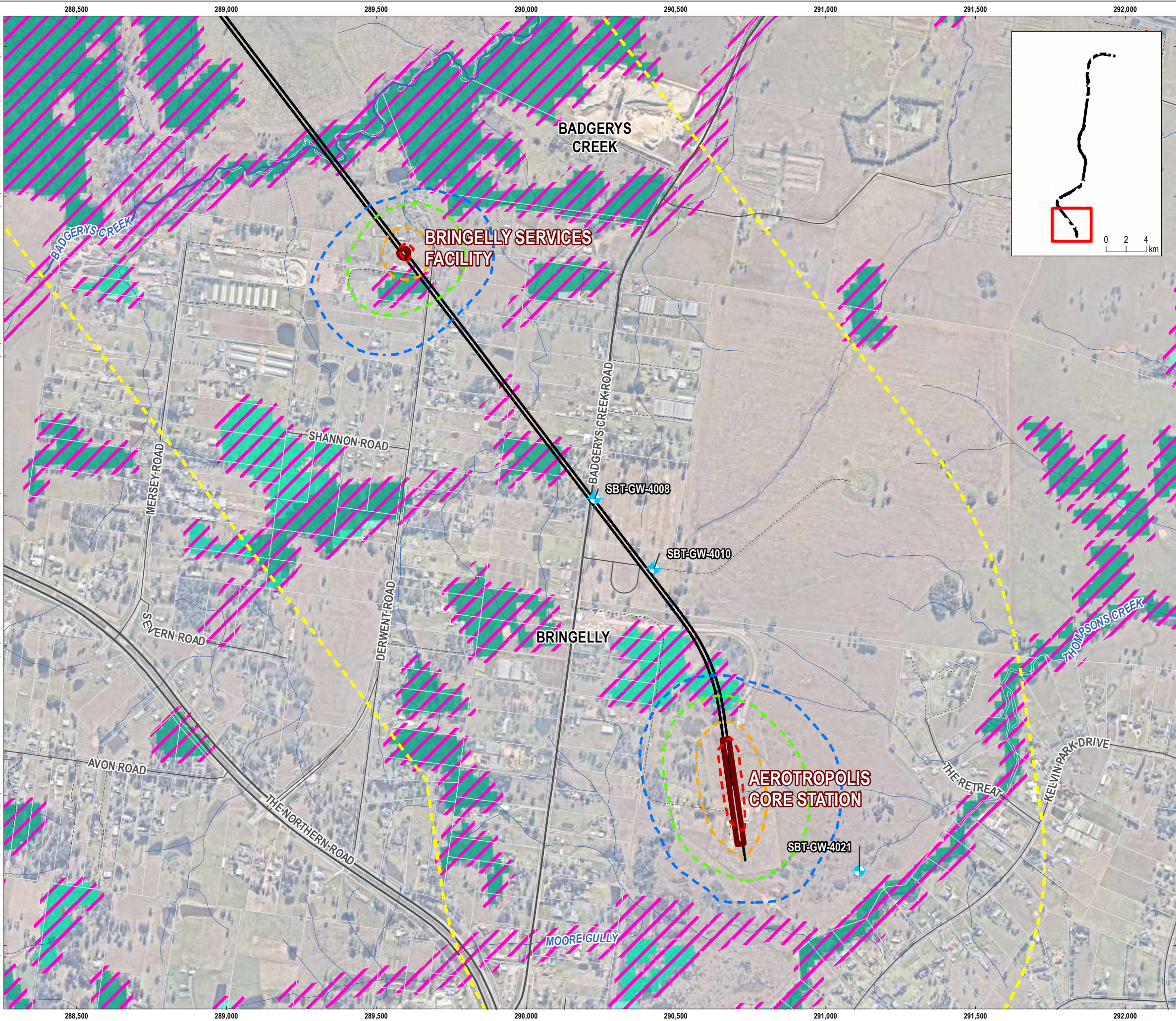
FIGURE C-4

Groundwater Receptors and Sensitive Areas
Groundwater Monitoring Plan



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DOC REFERENCE: \\T:\LOCAL\OFS\772\GIS\288919_SYDGE_CPBG_WSASBT_GIS\MXD\SYDGE\292575_GMP_C_CREVE\292575_GMP_C_GIS005_REV0.MXD_1
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LEGEND

- GDE Monitoring Location
- Existing
- Project Alignment
- Project Alignment Structure
- Roads
- Major Road
 - Minor Road
- Track
- Watercourses
- Perennial Watercourse
 - Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)
- High Ecological Value Waterways
- Predicted Groundwater Drawdown
- 1 m
 - 2 m
 - 5 m
 - 10 m
- Terrestrial GDE
- High Potential GDE - from national assessment
 - Moderate Potential GDE - from national assessment
 - Low Potential GDE - from national assessment

SOURCE

GDE monitoring locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
GDEs from BOM.
HEV waterways from DPIE.
Cadastral, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).



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PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE C-5

**Groundwater Receptors and Sensitive Areas
Groundwater Monitoring Plan**



**TETRA TECH
COFFEY**

DATE: 30.08.23 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_C_FC-5_GIS_REVE

DISCLAIMER: THIS FIGURE HAS BEEN PRODUCED FOR INTERNAL REVIEW ONLY AND MAY CONTAIN INCONSISTENCIES OR OMISSIONS. IT IS NOT INTENDED FOR PUBLICATION.

Terrestrial GDEs

There are a large number of native vegetation stands mapped by the GDE atlas (BoM, 2021) as having a moderate and high likelihood of groundwater dependence. The main areas of intact vegetation communities that are indicated to likely be groundwater dependent were identified as areas of:

- Cumberland River Flat Forest
- Cumberland Shale Plains Woodland
- Swamp Oak Floodplain Forest
- River Flat Forest
- Shale Gravel Transition Forest
- Cumberland Shale Plains Woodland.

Vegetation surveys of these and other mapped areas have not been reviewed and further commentary around the intactness and value of these vegetation stands has not yet been considered. They are assumed to be healthy, mature native vegetation of high ecological value.

Cumberland Shale Plain Woodland is the most widely distributed form of Cumberland Plain Woodland in the project area. Published descriptions of this ecosystem notes that *Bursaria spinosa* is the dominant shrub species and there are canopy trees such as grey box (*E. moluccana*), forest red gum (*E. tereticornis*), spotted gum (*Corymbia maculata*) and thin leaved stringybark (*E. eugenoides*) (NSW National Parks and Wildlife Service, 2004).

These mature trees are likely to have root zones that could extend several metres to the capillary fringe and would mostly be considered facultative GDEs, particularly outside of riparian corridors.

The Cumberland Plain Woodland vegetation class, which includes the Cumberland Shale Plain Woodland, is listed as an endangered ecological community under the *Threatened Species Conservation Act 1995* (NSW) (TSC Act) and the *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act).

Stands of Cumberland River Flat Forest present in the riparian zone along South Creek to the east and southeast of Orchard Hills station also have a high conservation value. It is listed as endangered under the TSC Act and critically endangered under the EPBC Act.

The river flat forest is commonly comprised of *Eucalyptus tereticornis* (forest red gum), *E. amplifolia* (cabbage gum), *Angophora floribunda* (rough-barked apple) and *A. subvelutina* (broad-leaved apple). Groundwater is expected to be shallow in the riparian zone, would be maintained by recharge from South Creek during dry periods, and would likely provide year-round water to this groundwater dependent ecosystem.

This terrestrial GDE assessment has focussed on moderate and high likelihood terrestrial GDEs where they exist within close proximity to structures that will require dewatering during construction. These areas are discussed in the following sections.

St Marys Station

There are no mapped or suspected terrestrial GDEs within 1 km of the St Marys station. The closest area of mapped terrestrial GDE is approximately 1.3 km to the northeast at Boronia Park (Figure C-2).

Claremont Meadows facility

A high likelihood terrestrial GDE is located approximately 80 m east and southeast of the proposed Claremont Meadows facility. Local groundwater level monitoring at SMGW-BJ-A304 and SMGW-



BH-A109S confirm groundwater is in the order of 2.0 to 2.5 m below ground level (mbgl) and would be expected to support mature native vegetation for some of their water needs.

Vegetation to the north of the facility along the ephemeral Claremont Creek riparian zone is not mapped as a terrestrial GDE, however it is likely to rely on the subsurface presence of groundwater in the alluvial sediments mapped along the creek line. This vegetation may be considered obligate, but further investigation would be required to confirm this assumption.

Orchards Hill Station

Most stands of mature native vegetation in the vicinity of the Orchards Hill Station are considered high likelihood GDEs (Figure C-3). The native vegetation in the area immediately surrounding the proposed station is predominantly Cumberland Shale Plains Woodland. Groundwater levels measured along the project alignment confirm a relatively shallow water table ranging between 3 to 5 m below ground level. Larger trees (particularly forest red gum, spotted gum and cabbage gum) would have a root zone that could extend to the capillary fringe and would likely be considered facultative GDEs.

Areas of Cumberland River Flat Forest also exist south of Lansdowne Road and east along South Creek. Groundwater is expected to be shallow in the riparian zone, would be maintained by interaction with South Creek during dry periods, and would likely provide year-round water to this groundwater dependent ecosystem. Some or all of the vegetation in the riparian zone could be considered obligate, but further investigation would be required to confirm this assumption.

Bringelly services facility

The Bringelly Services facility is located within approximately 30 m of a 1.3 ha stand of Cumberland Shale Plains Woodland that is mapped as a high likelihood GDE. This small stand of large trees appears in aerial photographs to be located on private property and may be highly altered from its natural condition. Ecological surveys of this vegetation may be warranted where there is potential impact.

Groundwater level monitoring at SMGW-BH-D103 indicates that the depth to groundwater is approximately 7.5 mbgl in the area. While this groundwater level is potentially approaching the maximum root depth of some large native trees (such as red gum) the degree of facultative groundwater dependence requires further site investigation to confirm.

Cumberland Shale Plains Woodland is also present 300 m north towards Badgerys Creek where this vegetation class may also be present as riparian vegetation along the creek line (Figure C-5). Groundwater levels are likely to be shallower towards Badgerys Creek (likely <5mbgl) and likelihood of groundwater dependence is expected to be high. Vegetation may be both facultative and obligate in this area.

Aerotropolis core

Cumberland River Flat Forest follows the riparian zone of Thompsons Creek and its minor tributaries and is listed as a high potential terrestrial GDE (Figure C-5). Other isolated stands of Cumberland River Flat Forest exist to the southwest and northwest of the station which are mapped with moderate potential for groundwater dependence. The condition of this vegetation is unknown and is mapped across private land which is likely to be highly altered from its natural condition.



Aquatic GDEs

The SBT Works are located within the South Creek catchment, which forms part of the wider Hawkesbury catchment. There are no high priority aquatic GDEs listed in the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (2011) within 1 km of the SBT Works.

Several creeks, including South Creek, exist within 1 km of the project area and may be groundwater dependent. This desktop GDE assessment has included reviewing the GDE Atlas (BoM, 2019), the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources, and relevant Technical Papers attached to the EES to provide an assessment of their potential dependence on groundwater.

Surface water features with suspected groundwater dependence are discussed in the following sections.

South Creek

South Creek flows in a northerly direction typically at more than a kilometre to the east of the project alignment, except towards the north where the alignment approaches and crosses the creek (Figure C-1).

The full length of South Creek is mapped as a high likelihood GDE from national assessments, meaning that the surface water flow in South Creek is likely to rely on baseflow discharge from groundwater to some extent. South Creek is likely to be in direct hydraulic connection with the alluvial sediments which overlies the Bringelly shale aquifer. Groundwater from the Bringelly shale aquifer is expected to discharge upwards to the alluvial aquifer which in turn, contributes baseflow to South Creek.

South Creek was noted to be highly altered from its natural state due to the surrounding rural, agricultural and urban land uses. Despite this, it is listed as a 'Type 1 – Highly sensitive key fish habitat' by the NSW Department of Primary Industries (2013). The EES indicated the potential for Australian Grayling, Macquarie Perch, and Murray Cod to be present at the site, which are listed as threatened species by EPBC Act. The macroinvertebrate communities present in South Creek were noted to have a high tolerance to severe pollution levels but included two threatened invertebrate species listed by the Fisheries Management Act (1994); Adam's Emerald Dragonfly and the Sydney Hawk Dragonfly.

Badgerys Creek

Badgerys Creek runs along the southern boundary of the Western Sydney International development site and discharges to South Creek. The reference design includes tunnelling beneath Badgerys Creek to the south of the airport site.

While Badgerys Creek is not listed as a potential aquatic GDE by the GDE atlas, the available groundwater level data indicates that it is likely to have variable groundwater interaction along its length, with some sections receiving groundwater discharge and others recharging groundwater (ARUP Technical Paper 7, 2020).

The stream as a whole is likely to have some reliance on groundwater, particularly where permanent pools of water are observed on aerial imagery. The total volume contributed by groundwater is likely to be a small proportion of the total passing flow. This is consistent with the measured salinity in surface water being an order of magnitude lower than the local groundwater quality.

Badgerys Creek is listed as a moderately sensitive key fish habitat by NSW DPI and provides some level of fish passage. The unnamed tributaries of Badgerys Creek have lower levels of ecosystem sensitivity (unlikely fish habitat).



Thompson Creek

Thompson Creek passes the Aerotropolis core approximately 320 m to the southeast. Thompsons Creek is not mapped as potentially groundwater dependent and is understood to only flow intermittently. This is largely supported by the review of aerial photography which suggests a predominantly dry creek bed. Thompson Creek is not considered to contain an aquatic GDE.



Annexure D Groundwater Quality Analytical Data



	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1	1	1.4	1.4							

Monitoring Zone	Location Code	Field ID	Date															
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<1	-	<1	1,680	310	-	<1	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<10	-	22	2,920	1,310	-	17	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<10	-	24	9,680	1,180	-	16	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<10	-	26	7,070	840	-	20	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<1	-	1	11,300	6,950	-	<1	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<1	-	1	11,100	6,440	-	<1	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	45	<1	16,000	6,900	17	<1	0.1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	<1	-	<1	31,200	1,220	-	<1	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<1	-	<1	540	130	-	<1	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<10	-	<10	6,850	<100	-	<10	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<1	-	1	2,840	<50	-	<1	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<1	-	<1	32,200	<50	-	<1	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<1	-	<1	274,000	180	-	<1	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<1	-	<1	142,000	<50	-	<1	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<1	360	<1	260,000	200	220	<1	0.6
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<1	-	<1	40,300	<50	-	<1	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	<1	3	<1	2,180	1,590	<1	<1	<0.1
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	<1	2	1	3,420	1,460	2	<1	<0.1
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	<1	2	<1	4,740	2,540	2	<1	<0.1
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	<1	6	<1	5,200	2,800	3	<1	<0.1
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	2	6	4	420	<50	<1	<1	<0.1
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	<1	4	2	870	<50	<1	<1	<0.1
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<1	2	6	590	<50	<1	<1	<0.1
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	<1	21	14	1,310	60	3	<1	<0.1
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	2	2	4,800	4,100	3	2	<0.1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<1	<1	<1	-	-	<1	<1	<0.05
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	1	-	-	-	-	-	<0.1	<0.1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	-	4,600	-	<1	-	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<1	-	45	5,310	<50	-	<1	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<1	-	25	4,390	<50	-	<1	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	350	59	6,800	<50	3	<1	<0.1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	<1	-	30	3,120	<50	-	<1	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<1	-	12	13,100	<50	-	<1	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	<1	-	4	23,700	<50	-	<1	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	<1	9	3	12,800	10,600	2	<1	<0.1
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	<1	9	6	2,290	620	1	<1	<0.1
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	<1	14	8	16,000	13,200	4	<1	<0.1
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	<1	30	1	22,400	17,500	4	<1	<0.1
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	<1	11	1	3,070	360	4	<1	<0.1
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<1	7	1	1,600	<50	2	<1	<0.1
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	<1	1	<1	400	270	<1	<1	<0.1
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	<1	6	<1	1,990	880	2	<1	<0.1
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	<1	3	<1	580	120	<1	<1	<0.1
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<1	-	<1	13,000	1,500	-	<1	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<1	29	11	18,900	<50	11	<1	<0.1
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<1	22	<1	11,900	1,760	10	<1	<0.1
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<1	19	<1	12,000	1,770	10	<1	<0.1
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	2	-	2	18,600	<50	-	<1	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	2	-	<1	115,000	880	-	<1	-	<0.1	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<10	-	<10	8,130	2,870	-	<10	-	<0.1	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	<1	4	1	960	450	<1	<1	<0.1	<0.1	17
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	<1	7	1	1,320	70	2	<1	<0.1	<0.1	18
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	1	5	<1	760	320	<1	<1	<0.1	<0.1	16
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	<1	7	<1	560	310	1	<1	<0.1	<0.1	16
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<1	3	<1	660	310	1	<1	<0.1	<0.1	14
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	<1	5	9	1,210	170	2	<1	<0.1	<0.1	31
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	<1	6	<1	1,360	230	1	<1	<0.1	<0.1	44
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<1	<1	<1	12,800	9,780	3	<1	<0.1	<0.1	31
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	1	<1	<1	5,190	4,800	<1	<1	<0.1	<0.1	11
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	2	7	4	4,700	120	4	5	<0.1	<0.1	90
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	2	-	930	-	<1	-	<0.01	-	46
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	-	-	110	<50	<1	<1	<0.1	<0.1	45
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<1	16	14	340	70	2	<1	<0.1	<0.1	426
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	<1	3	2	3,560	2,450	<1	<1	<0.1	<0.1	566
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<1	-	7	12,600	70	-	1	-	<0.1	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<1	<1	9	2,320	<50	<1	1	<0.1	<0.1	573
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	-	<1	-	-	-	<1	<0.1	<0.1	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<1	-	<1	-	<10	-	<1	<0.05	<0.05	27
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<1	-	-	-	950	<1	<1	<0.1	<0.1	24
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<1	-	1	-	980	<1	<1	<0.1	<0.1	26
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	317	-	-	-	157	-	<0.1	-	161
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	<1	<1	<1	6,000	4,340	<2	<1	<0.1	<0.1	6
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<1	-	<1	-	9,370	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	<1	<1	<1	9,370	9,370	<1	<1	-	-	7
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<1	<1	<1	4,020	4,780	<1	<1	<0.1	-	6
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	<1	<1	<1	6,000	4,340	<2	<1	<0.1	<0.1	6
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	<1	<4	<1	23,100	21,000	<1	<1	<0.1	<0.1	7
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	<1	5	<1	16,800	13,400	2	<1	<0.1	<0.1	9
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	<1	8	<1	18,500	12,000	4	<1	<0.1	<0.1	9
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<1	<1	<1	<50	<50	<1	<1	-	-	1
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<1	-	<1	-	<50	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	<50	<50	<1	<1	-	0.1	7
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	<1	63	<1	18,100	2,740	22	<1	<0.1	<0.1	40
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	<1	3	<1	5,560	3,630	2	<1	<0.1	<0.1	17
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	<1	<1	<1	2,660	2,000	<1	<1	<0.1	<0.1	12
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<1	8	<1	1,920	620	1	<1	<0.1	<0.1	25
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<1	1	<1	5,240	4,820	<1	<1	<0.1	<0.1	3
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<1	2	<1	4,860	3,530	1	<1	<0.1	<0.1	5
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<1	4	<1	5,070	3,820	2	<1	<0.1	<0.1	5
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	<1	<1	<1	3,360	2,820	<1	<1	<0.1	<0.1	17
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	<1	4	<1	4,880	770	2	<1	<0.1	<0.1	4
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	<1	2	<1	3,220	850	1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<1	1	<1	2,500	1,020	2	<1	<0.1	<0.1	<1
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	<1	<1	<1	5,750	5,700	<1	<1	<0.1	<0.1	1
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	<1	2	2	6,400	4,560	1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	<1	<1	<1	5,640	3,970	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	4,970	3,360	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<1	-	2	3,310	540	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<1	-	<1	2,420	310	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	170	<50	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	140	130	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	<1	<1	<1	860	200	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	700	220	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	<1	<1	1	190	50	<1	<1	<0.1	<0.1	<1

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<1	1	1	4,400	2,550	<1	<1	<0.1	<0.1	4
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	<1	<1	<1	2,500	1,600	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<1	2	<1	3,090	2,860	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	<1	<1	<1	2,480	2,130	<1	<1	<0.1	<0.1	<1
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<1	4	<1	3,250	2,110	1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	<1	2	1	940	640	<1	<1	<0.1	<0.1	1
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<1	3	2	690	150	<1	<1	<0.1	<0.1	3
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<1	4	7	1,980	120	<1	<1	<0.1	<0.1	2
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	14	18	<1	360	<50	2	<1	<0.1	<0.1	10
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	<1	9	<1	340	<50	<1	<1	<0.1	<0.1	4
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	5	-	23	1,530	<50	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	7	-	23	1,320	<50	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	6	-	17	1,370	200	-	<1	-	<0.1	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	<1	<1	<1	2,310	2,260	<1	<1	<0.1	<0.1	3
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<1	<1	<1	1,020	800	<1	<1	<0.1	<0.1	4
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<1	<1	<1	1,050	930	<1	<1	<0.1	<0.1	6
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	<1	<1	2	1,400	1,100	<1	<1	<0.1	<0.1	9
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<1	4	<1	2,800	2,100	1	<1	<0.1	<0.1	5
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	7	-	-	-	<1	-	<0.1	-	61
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	16	16	850	180	<1	<1	<0.1	<0.1	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	<1	5	1	5,100	230	2	<1	<0.01	<0.1	12
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<1	-	<1	9,090	5,730	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	2	-	<1	77,900	220	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<1	-	<1	5,480	<50	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<1	-	11	-	-	-	4	-	<0.1	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<1	-	11	62,300	1,340	-	4	-	<0.1	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	<1	-	12	4,250	600	-	6	-	<0.1	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<1	-	2	25,000	20,100	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<1	-	3	22,000	11,000	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<1	-	2	25,800	23,700	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	1	-	3	13,000	20,900	-	2	-	<0.1	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<10	-	<10	-	-	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<10	-	<10	-	-	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<10	-	<10	2,480	<100	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<10	-	<10	5,940	<100	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<1	-	<1	1,760	1,210	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<1	-	<1	12,900	1,670	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<1	-	<1	5,110	1,750	-	<1	-	<0.1	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	32	-	47	910	100	-	33	-	<0.1	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<10	-	<10	13,000	<100	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<10	-	<10	2,190	1,120	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<10	-	<10	13,300	160	-	<10	-	<0.1	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	4	-	79	34,200	29,800	-	50	-	<0.1	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<1	-	1	-	-	-	<1	-	<0.1	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<1	-	3	-	-	-	<1	-	<0.1	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<1	-	1	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<1	<1	<1	290	290	<1	<1	-	-	26
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<1	-	<1	-	290	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<1	<5	<1	2,490	2,150	<1	<1	<0.1	<0.1	25
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<1	<1	<1	1,930	2,290	<2	<1	<0.1	<0.1	15
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	<1	6	3	960	630	<1	<1	<0.1	<0.1	8
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	1	12	3	4,470	1,300	5	<1	<0.1	<0.1	12
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<1	52	10	2,540	1,930	<1	<1	<0.1	<0.1	76
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	<1	56	1	2,120	1,590	<1	<1	<0.1	<0.1	67

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<1	57	<1	1,580	400	<1	<1	<0.1	<0.1	45
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<1	190	<1	2,420	550	<1	<1	<0.1	<0.1	95
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	3	<1	2	3,570	5,480	<1	<1	<0.1	<0.1	12
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<1	397	<1	6,040	3,700	<1	<1	<0.1	<0.1	99
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<1	5	<1	113,000	115,000	2	<1	<0.1	<0.1	180
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	<1	7	4	106,000	104,000	<1	<1	<0.1	<0.1	160
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	<1	<1	<1	105,000	88,700	<1	<1	<0.1	<0.1	161
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	<1	2	<1	80,000	66,800	6	1	<0.1	<0.1	213
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	5	16	11	62,100	85,000	25	21	<0.1	<0.1	235
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	1	12	11	22,800	18,300	14	13	<0.1	<0.1	211
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	<1	34	24	28,400	25,600	16	14	<0.1	<0.1	249
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	<1	17	16	33,400	30,800	13	13	<0.1	<0.1	232
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	2	1	<1	97,000	98,900	4	2	<0.1	<0.1	293
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	-	-	-	-	-	-	18	<0.1	270
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	-	-	-	-	-	<1	<0.1	<0.1	120
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	1	-	-	-	-	6	-	<0.05	<0.05	200
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	-	-	-	-	4	-	-	<0.1	140
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	-	-	-	-	4	-	0.7	<0.1	140
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<1	-	<1	29,600	30,900	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	<1	-	<1	59,600	23,200	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	14	12	460	300	2	2	<0.01	<0.1	140
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	-	-	460	300	-	-	<0.01	<0.1	140
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	3	-	5	-	<50	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	3	-	480	-	1	-	<0.1	-	6
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	1	-	134	-	60	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<1	-	11	-	2,120	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<1	-	13	-	2,080	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	-	4	-	1,700	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<1	-	3	-	120	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<1	-	30	-	2,060	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<1	-	504	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<1	-	19	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	68	-	-	-	3	-	<0.1	-	34
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<1	-	21	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<1	-	36	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<1	-	9	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<1	-	12	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<1	-	9	-	-	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<1	-	354	-	260	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	53	-	14	-	<50	-	<1	-	<0.1	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<1	-	2	-	-	-	<1	-	<0.1	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<1	-	4	-	-	-	<1	-	<0.1	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	1	-	<0.1	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<1	-	1	-	-	-	<1	-	<0.1	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	24	-	1	-	-	-	4	-	<0.1	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<1	-	2	11,600	10,700	-	5	-	<0.1	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<1	-	1	18,600	150	-	<1	-	<0.1	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<1	-	<1	18,500	100	-	<1	-	<0.1	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<1	-	<1	12,400	<50	-	<1	-	<0.1	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<1	-	<1	14,600	320	-	<1	-	<0.1	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<1	-	<1	5,590	330	-	<1	-	<0.1	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<1	-	<1	3,410	330	-	<1	-	<0.1	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	2	-	1	-	-	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<1	-	<1	6,160	2,240	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<1	-	<1	19,400	730	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<1	-	<1	5,560	7,520	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<1	-	4	4,390	100	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<1	-	<1	6,770	1,270	-	<1	-	<0.1	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<1	-	<1	9,320	1,250	-	<1	-	<0.1	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<1	-	4	4,740	430	-	<1	-	<0.1	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<1	-	2	3,170	430	-	<1	-	<0.1	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<1	-	<1	5,830	1,060	-	<1	-	<0.1	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	<1	-	<1	5,610	1,160	-	<1	-	<0.1	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<1	-	<1	4,400	1,300	-	<1	-	<0.1	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<1	-	2	190	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<1	-	3	1,020	640	-	<1	-	<0.1	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<1	-	4	10,100	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<1	-	4	10,800	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<1	-	3	1,770	1,750	-	<1	-	<0.1	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<1	-	<1	1,940	1,480	-	<1	-	<0.1	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<1	-	<1	1,830	1,480	-	<1	-	<0.1	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<1	42	<1	18,700	60	11	<1	<0.1	<0.1	65
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	2	-	<1	1,970	1,310	-	7	-	<0.1	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	2	-	34	1,590	1,010	-	16	-	<0.1	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<10	-	81	1,260	<100	-	21	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<1	-	28	-	-	-	7	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<1	-	15	-	-	-	7	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<1	-	29	-	210	-	7	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<1	-	13	330	110	-	7	-	<0.1	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<10	17	13	1,900	<500	10	6	0.1	<0.1	39
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<1	-	13	1,270	110	-	6	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<1	-	12	510	<50	-	6	-	<0.1	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<1	-	12	130	<50	-	6	-	<0.1	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<1	-	2	1,250	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<1	-	<1	7,860	100	-	<1	-	<0.1	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<1	-	2	7,400	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<1	-	<1	41,100	6,480	-	<1	-	<0.1	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<1	-	<1	39,300	6,460	-	<1	-	<0.1	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<1	-	<1	167,000	12,800	-	<1	-	0.5	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<1	-	1	559,000	13,800	-	<1	-	<0.1	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<1	-	<1	445,000	9,500	-	<1	-	<0.1	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<1	-	<1	134,000	21,100	-	<1	-	<0.1	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<1	-	<1	46,700	12,700	-	<1	-	<0.1	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<1	-	<1	162,000	23,000	-	<1	-	<0.1	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<1	-	<1	1,440,000	22,800	-	<1	-	<0.1	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<1	-	<1	37,900	2,260	-	<1	-	<0.1	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<1	-	<1	176,000	720	-	<1	-	<0.1	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<1	-	<1	177,000	700	-	<1	-	<0.1	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<1	-	1	200,000	5,580	-	<1	-	<0.1	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<1	-	11	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	3	-	7	-	-	-	8	-	<0.1	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	2	-	7	-	-	-	10	-	<0.1	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	12	-	<1	-	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<1	-	28	-	-	-	3	-	<0.1	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<1	-	8	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<1	-	1	10,000	4,880	-	1	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<1	-	1	14,100	2,200	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<1	-	6	1,520	710	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	<1	-	2	7,130	1,650	-	4	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	<1	-	4	108,000	2,390	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	<1	-	3	56,600	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<10	-	<10	22,400	1,490	-	<10	-	<0.1	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<10	-	<10	8,460	3,600	-	<10	-	<0.1	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<1	-	<1	12,200	60	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	7	-	5	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<1	-	<1	-	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<1	-	2	-	800	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<1	-	<1	4,990	5,190	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<1	-	2	62,500	5,440	-	<1	-	<0.1	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	1	-	8	6,480	1,400	-	<1	-	0.1	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	<1	-	<1	705,000	1,650	-	<1	-	<0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<10	-	<10	-	-	-	<10	-	<0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<10	-	<10	-	-	-	<10	-	<0.1	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<1	-	<1	-	7,640	-	<1	-	<0.1	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<1	-	<1	-	8,170	-	<1	-	<0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<1	-	2	-	4,240	-	<1	-	<0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<1	-	5	-	6,320	-	1	-	0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<1	-	1	-	7,720	-	<1	-	<0.1	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<1	-	<1	-	7,780	-	<1	-	<0.1	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<1	-	<1	-	70	-	<1	-	<0.1	-
St Marys	SB																			

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<1	-	<1	19,500	680	-	<1	-	<0.1	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	2	-	<1	-	860	-	<1	-	<0.1	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<1	<1	<1	2,410	310	<1	<1	<0.1	<0.1	23
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<1	-	<1	16,300	160	-	<1	-	<0.1	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	2	-	10	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	2	-	2	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	2	-	2	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	1	-	2	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	4	-	<1	-	1,120	-	<1	-	<0.1	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	4	-	4	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	4	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	2	-	<1	-	3,130	-	<1	-	<0.1	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<1	-	5	70,800	51,100	-	<1	-	<0.1	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	2	-	<1	1,030	140	-	<1	-	<0.1	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<1	-	<1	74,800	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<1	85	<1	90,400	<50	47	<1	<0.1	<0.1	58
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<1	-	2	86,400	67,100	-	<1	-	<0.1	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<1	-	<1	21,600	2,180	-	<1	-	<0.1	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	4	-	<1	5,820	1,120	-	<1	-	<0.1	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<1	57	1	23,600	270	15	<1	<0.1	<0.1	25
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<1	96	3	54,400	<50	28	<1	0.3	<0.1	65
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	58	-	4	<50	<50	-	<1	-	<0.1	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	40	-	3	2,450	<50	-	<1	-	<0.1	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<1	-	2	-	80	-	<1	-	<0.1	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	<1	<7	<1	1,900	1,250	<2	<1	<0.1	<0.1	5
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	<1	14	2	2,130	<50	<2	<1	<0.1	<0.1	24
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	<1	2	1	19,800	18,500	2	1	-	-	30
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<1	<5	<1	1,780	1,530	<1	<1	<0.1	<0.1	10
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	<1	19	14	340	<50	1	1	<0.1	<0.1	40
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	<1	<2	<1	19,800	18,500	<2	<1	<0.1	<0.1	30
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	<1	<1	<1	24,900	25,000	<1	<1	<0.1	<0.1	30
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	<1	<1	<1	16,300	16,100	1	<1	<0.1	<0.1	49
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	<1	1	2	15,800	15,900	1	1	<0.1	<0.1	50
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	<1	<1	<1	16,100	14,700	2	1	<0.1	<0.1	59
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	<1	4	<1	23,900	19,300	2	<1	<0.1	<0.1	59
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	<1	<1	<1	17,800	15,600	<1	<1	<0.1	<0.1	46
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	<1	<1	1	17,800	15,400	1	<1	<0.1	<0.1	50
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	7	1	5,950	4,030	2	-	-	-	9
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	<1	5	<1	4,860	4,440	1	<1	<0.1	<0.1	11
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	<1	11	<1	8,680	4,160	4	<1	<0.1	<0.1	13
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<1	5	1	4,440	2,850	2	<1	<0.1	<0.1	7
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	<1	<1	<1	3,790	2,990	<1	<1	<0.1	<0.1	5
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	<1	3	<1	1,940	1,840	<1	<1	<0.1	<0.1	3

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	1	1.4	1.4							
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<1	10	4	410	<50	<1	<1	<0.1	<0.1	4
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	2	3	<1	1,420	5,360	<1	<1	<0.1	<0.1	3
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<1	26	<1	22,300	100	63	<1	<0.1	<0.1	15
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	7	<1	2,300	590	2	<1	<0.1	<0.1	18
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	9	-	1,500	-	2.2	-	<0.01	-	55
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	2	8	22	720	150	2	4	<0.1	<0.1	19
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	2.5	-	400	-	1.3	-	<0.01	-	27
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<1	-	7	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	10	-	-	-	<1	-	<0.1	-	22
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	<1	-	2	640	<50	-	<1	-	<0.1	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	12	-	7,000	-	4.7	-	<0.01	-	1,000
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<1	-	<1	16,500	5,340	-	<1	-	<0.1	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<1	65	2	17,000	<50	12	<1	<0.1	<0.1	75
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	1	-	225	-	14,200	-	9	-	<0.1	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	4	-	3,080	-	-	-	45	-	<0.1	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<10	-	3,240	120,000	13,900	-	45	-	<0.1	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	2	-	1,860	256,000	15,600	-	42	-	<0.1	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	1	-	752	28,600	15,400	-	36	-	<0.1	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<1	-	2	-	<50	-	<1	-	<0.1	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	2	-	517	-	-	-	21	-	<0.1	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<1	-	2	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	3	-	2	-	-	-	<1	-	<0.1	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	1	-	53	-	<50	-	<1	-	<0.1	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	2	-	868	-	<50	-	<1	-	<0.1	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<1	-	<1	430	<50	-	<1	-	0.1	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	<1	-	<1	1,270	<50	-	<1	-	0.1	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	17	3	43,000	12,000	28	5	<0.1	<0.1	42
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<1	-	3	8,840	3,740	-	<1	-	<0.1	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<1	-	2	11,000	9,730	-	4	-	<0.1	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<1	-	7	42,700	10,200	-	3	-	<0.1	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	2	-	<1	-	-	-	<1	-	<0.1	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	67	-	-	-	11	-	<0.1	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	24	-	-	-	2	-	<0.1	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	26	-	-	-	<2	-	<0.1	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	28	-	-	-	2	-	<0.1	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	49	-	-	-	3	-	<0.1	-

	Metals																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1		15	15					1	1	80

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	5	-	28	-	-	-	-	-	210
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	182	-	267	-	-	-	<10	-	7,100
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	180	-	352	-	-	-	-	-	13,500
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	222	-	542	-	-	-	-	-	10,900
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	18	-	20	-	-	-	<10	-	2,740
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	17	-	20	-	-	-	<10	-	2,720
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	17	97	23	-	-	-	-	-	8,400
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	21	-	23	-	-	-	<10	-	9,540
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	5	-	6	-	-	-	<10	-	160
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<10	-	<50	-	-	-	-	-	4,510
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<1	-	<5	-	-	-	<10	-	2,230
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<1	-	<5	-	-	-	-	-	21,200
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	8	-	8	-	-	-	-	-	85,400
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	7	-	5	-	-	-	-	-	42,500
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	7	780	7	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	15	-	19	-	-	-	-	-	3,910
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	2	13	<5	4	5	<10	<10	-	490
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	<1	20	6	1	<1	<10	<10	-	640
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	<1	21	<5	4	3	<10	<10	-	1,210
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	<1	36	8	5	<1	<10	<10	-	1,360
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	4	<5	<5	14	10	<10	<10	-	320
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	2	<5	<5	5	4	<10	<10	-	620
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	5	7	5	4	4	<10	<10	-	350
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	3	32	<5	12	10	<10	<10	-	870
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	3	9	<5	18	13	<1	2	-	310
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	1	2	2	12	13	<1	<1	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	3	<5	-	19	13	<1	2	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<5	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<5	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	66	-	54	-	-	-	-	<10	900
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	57	-	41	-	-	-	-	<10	700
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	59	120	44	-	-	-	-	-	660
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	8	-	38	-	-	-	-	<10	1,020
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	9	-	16	-	-	-	-	<10	9,800
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	6	-	18	-	-	-	-	<10	10,700
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	163	274	279	<1	<1	<10	<10	-	960
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	128	281	271	1	<1	<10	<10	-	1,500
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	175	345	322	<1	<1	<10	<10	-	2,380
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	223	487	274	<1	<1	<10	10	-	2,940
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	5	49	<5	7	4	<10	<10	-	2,180
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	6	25	7	6	3	<10	<10	-	1,020
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	6	5	<5	2	2	<10	<10	-	130
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	4	28	<5	2	<1	<10	<10	-	1,290
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	4	17	<5	<1	<1	<10	<10	-	440
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	3	-	<5	-	-	-	-	-	10,300
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	395	809	806	-	-	-	-	-	5,060
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	4	86	<5	-	-	-	-	-	9,130
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	4	79	<5	-	-	-	-	-	8,990
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	11	-	20	-	-	-	-	<10	1,340

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	5	-	7	-	-	-	-	-	-	39,400
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<10	-	<50	-	-	-	-	-	-	990
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	13	29	10	3	2	<10	<10	-	-	910
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	7	49	9	4	5	<10	<10	-	-	1,640
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	15	38	<5	3	2	<10	<10	-	-	510
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	11	31	<5	2	<1	<10	<10	-	-	260
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	10	26	<5	2	<1	<10	<10	-	-	310
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	39	130	156	2	2	<10	<10	-	-	530
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	27	184	82	2	2	<10	<10	-	-	700
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	31	14	<5	<1	<1	<10	<10	-	-	950
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	10	15	10	<1	3	<10	<10	-	-	80
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	79	62	50	<5	<5	<1	3	<5	-	1,400
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	28	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	45	34	37	<5	<5	1	<1	-	-	60
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	414	492	482	<1	<1	<10	<10	-	-	650
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	533	117	<5	<1	<1	<10	<10	-	-	350
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	534	-	826	-	-	-	-	-	-	3,920
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	409	826	844	-	-	-	-	-	-	800
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	12	-	<5	5	2	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	21	69	50	<1	<1	<1	<1	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	22	58	54	<5	<5	<1	<1	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	22	56	50	<5	<5	<1	<1	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	640	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	6	<9	<5	<1	<1	<10	<10	-	-	<830
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	7	-	<5	-	-	-	<10	-	<10	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	7	<5	<5	-	-	<10	<10	-	-	20
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	6	<19	<5	<1	<1	<10	<10	-	-	<2,190
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	6	<9	<5	<1	<1	<10	<10	-	-	<830
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	6	12	8	<1	<1	<10	<10	-	-	<950
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	6	19	8	<1	<1	<10	<10	-	-	2,170
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	6	23	8	<1	<1	<10	<10	-	-	2,740
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	1	<5	<5	-	-	<10	<10	-	-	<10
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	1	-	<5	-	-	-	<10	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	7	<5	<5	-	-	10	10	-	-	240
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	15	113	10	2	1	<10	<10	-	-	12,800
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	10	21	<5	2	<1	<10	<10	-	-	720
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	1	19	<5	<1	<1	<10	<10	-	-	90
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	2	22	<5	6	<1	<10	<10	-	-	630
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	6	23	8	2	1	<10	<10	-	-	380
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	3	51	10	2	<1	<10	<10	-	-	580
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	3	65	6	2	<1	<10	<10	-	-	1,220
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	12	17	15	<1	<1	<10	<10	-	-	150
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	4	15	<5	<1	<1	<10	<10	-	-	1,550
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	1	13	<5	<1	<1	<10	<10	-	-	1,720
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	1	9	<5	<1	<1	<10	<10	-	-	670
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	<1	22	16	2	<1	<10	<10	-	-	210
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	<1	55	18	<1	<1	<10	<10	-	-	340
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	<1	26	16	1	<1	<10	<10	-	-	350
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	4	16	27	-	2	-	-	-	-	130
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	8	-	6	-	-	-	-	-	<10	2,660
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	8	-	<5	-	-	-	-	-	-	980
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	2	<5	<5	<1	<1	<10	<10	-	-	20
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	2	<5	<5	<1	<1	<10	<10	-	-	<10
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	2	<5	<5	<1	<1	<10	<10	-	-	290
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	2	<5	7	<1	<1	<10	<10	-	-	190
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	1	<5	<5	<1	<1	<10	<10	-	-	30

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	3	53	24	3	<1	<10	<10	-	-	180
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	<1	20	8	2	<1	<10	<10	-	-	490
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	2	20	13	2	<1	<10	<10	-	-	120
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	<1	8	5	<1	<1	<10	<10	-	-	10
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	2	9	<5	<1	<1	<10	<10	-	-	870
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	1	<5	<5	<1	<1	<10	<10	-	-	580
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	3	16	10	1	1	<10	<10	-	-	410
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	2	9	<5	1	<1	<10	<10	-	-	520
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	13	22	<5	234	187	<10	<10	-	-	220
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	4	13	<5	124	94	<10	<10	-	-	80
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	4	-	22	-	-	-	-	-	<10	580
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	5	-	33	-	-	-	-	-	-	510
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	5	-	52	-	-	-	-	-	-	360
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	3	6	<5	3	2	<10	<10	-	-	70
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	2	5	<5	10	4	<10	<10	-	-	40
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	3	7	<5	8	3	<10	<10	-	-	90
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	3	10	<5	6	3	<10	<10	-	-	50
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	3	45	<5	4	4	<10	<10	-	-	520
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	15	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	8	-	9	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	9	24	28	<5	<5	<1	<1	-	-	200
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	6	13	5	<5	<5	<1	<1	-	-	1,900
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	23	-	38	-	-	-	-	-	<10	1,790
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	26	-	41	-	-	-	-	-	-	23,900
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	11	-	7	-	-	-	-	-	<10	1,060
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	72	-	169	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	62	-	147	-	-	-	-	-	<10	23,400
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	65	-	182	-	-	-	-	-	-	3,380
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	66	-	154	-	-	-	-	-	<10	1,260
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	53	-	150	-	-	-	-	-	-	1,900
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	67	-	187	-	-	-	-	-	-	2,190
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	60	-	177	-	-	-	-	-	-	910
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	279	-	416	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	334	-	559	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	334	-	676	-	-	-	-	-	<10	2,420
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	392	-	833	-	-	-	-	-	<10	3,830
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	2	-	<5	-	-	-	-	-	<10	360
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	5	-	8	-	-	-	-	-	-	3,670
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	5	-	9	-	-	-	-	-	<10	490
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	35	-	51	-	-	-	-	-	-	190
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<10	-	<50	-	-	-	-	-	-	1,810
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<10	-	<50	-	-	-	-	-	-	150
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<10	-	<50	-	-	-	-	-	-	1,840
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	114	-	478	-	-	-	-	-	-	3,270
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	20	-	29	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	19	-	70	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	22	-	77	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	23	-	78	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	26	11	11	-	-	<10	<10	-	-	<10
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	26	-	11	-	-	-	<10	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	24	<7	<5	3	2	<10	<10	-	-	<700
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	14	<5	<5	2	2	<10	<10	-	-	<80
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	7	15	8	3	3	<10	<10	-	-	510
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	6	40	9	2	1	<10	<10	-	-	2,930
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	84	29	7	2	<1	<10	<10	-	-	70
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	2	242	<5	3	<1	<10	<10	-	-	80

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<1	88	16	2	<1	<10	<10	-	-	90
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	3	197	<5	6	<1	<10	<10	-	-	200
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	40	<5	363	<1	<1	<10	<10	-	-	<10
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	2	285	<5	4	2	<10	<10	-	-	180
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	166	138	-	4	<1	<10	<10	-	-	990
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	142	247	66	2	1	<10	<10	-	-	1,310
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	144	187	154	1	<1	<10	<10	-	-	1,020
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	213	336	320	<1	<1	30	20	-	-	2,170
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	270	523	606	<1	<1	10	10	-	-	1,990
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	189	394	369	<1	<1	<10	10	-	-	1,580
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	209	508	416	<1	<1	10	10	-	-	2,330
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	238	474	466	<1	<1	10	30	-	-	1,870
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	278	486	443	<1	<1	30	20	-	-	1,330
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	240	300	270	<5	<5	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	100	54	41	<5	<5	2	<1	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	190	340	240	<1	<1	<1	<1	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	130	220	180	<5	<5	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	130	240	180	<5	<5	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	107	-	31	-	-	-	-	-	<10	500
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	91	-	43	-	-	-	-	-	-	12,400
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	120	190	150	<5	<5	<1	2	-	-	500
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	120	190	150	<5	<5	<1	2	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	6	-	<5	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	9	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	111	-	106	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	34	-	20	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	34	-	20	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	22	-	16	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	17	-	<5	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	9	-	12	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	47	-	39	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	15	-	15	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	29	-	53	-	-	-	-	<10	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	70	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	28	-	56	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	8	-	<5	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	46	-	60	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	44	-	59	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	43	-	61	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	104	-	230	-	-	-	-	-	<10	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	6	-	<5	-	-	-	-	-	30	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	12	-	50	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	2	-	28	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	37	-	96	-	-	-	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	5	-	50	-	-	-	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	18	-	81	-	-	-	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	20	-	54	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	19	-	50	-	-	-	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	40	-	125	-	-	-	-	-	-	940
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	3	-	<5	-	-	-	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	3	-	9	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	3	-	5	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	2	-	15	-	-	-	-	-	<10	9,660

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	2	-	17	-	-	-	-	-	<10	5,280
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	3	-	17	-	-	-	-	-	<10	2,180
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	2	-	12	-	-	-	-	-	-	3,000
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	3	-	20	-	-	-	-	-	-	910
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	3	-	21	-	-	-	-	-	-	930
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	40	-	53	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	30	-	88	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	26	-	66	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	23	-	72	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	16	-	65	-	-	-	-	-	<10	2,120
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	15	-	100	-	-	-	-	-	<100	10,200
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	16	-	54	-	-	-	-	-	<10	720
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	10	-	160	-	-	-	-	-	-	1,340
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	12	-	49	-	-	-	-	-	-	830
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	11	-	50	-	-	-	-	-	-	1,540
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	10	-	41	-	-	-	-	-	<10	2,960
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	12	-	63	-	-	-	-	-	-	1,980
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	8	-	32	-	-	-	-	-	<10	3,760
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	8	-	33	-	-	-	-	-	<10	3,610
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	7	-	32	-	-	-	-	-	-	2,700
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<1	-	9	-	-	-	-	-	<10	140
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	4	-	6	-	-	-	-	-	-	360
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	3	-	19	-	-	-	-	-	-	2,630
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	3	-	18	-	-	-	-	-	-	2,730
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	52	-	77	-	-	-	-	-	-	100
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	44	-	70	-	-	-	-	-	-	130
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	44	-	70	-	-	-	-	-	-	110
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	57	104	74	-	-	-	-	-	-	5,160
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	498	-	1,150	-	-	-	-	-	<10	10,200
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	548	-	1,430	-	-	-	-	-	-	10,900
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	523	-	1,750	-	-	-	-	-	<10	21,300
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	46	-	172	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	45	-	164	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	44	-	160	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	39	-	152	-	-	-	-	-	<10	2,030
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	30	160	140	-	-	-	-	-	-	3,300
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	39	-	145	-	-	-	-	-	<10	2,770
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	43	-	135	-	-	-	-	-	-	2,220
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	33	-	118	-	-	-	-	-	<10	1,790
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<1	-	34	-	-	-	-	-	<10	790
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	7	-	44	-	-	-	-	-	-	5,900
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	3	-	27	-	-	-	-	-	<10	6,380
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	44	-	68	-	-	-	-	-	-	13,500

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	45	-	70	-	-	-	-	-	-	12,100
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	286	-	140	-	-	-	-	-	-	61,900
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	33	-	26	-	-	-	-	-	-	180,000
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	29	-	25	-	-	-	-	-	-	149,000
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	36	-	12	-	-	-	-	-	-	39,100
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	50	-	101	-	-	-	-	-	-	12,400
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	80	-	32	-	-	-	-	-	-	41,200
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	41	-	24	-	-	-	-	-	-	432,000
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	34	-	66	-	-	-	-	-	-	18,200
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	42	-	33	-	-	-	-	-	-	87,200
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	40	-	26	-	-	-	-	-	-	86,100
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	34	-	27	-	-	-	-	-	-	73,900
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	57	-	188	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	65	-	173	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	69	-	186	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<1	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	73	-	236	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	68	-	182	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	69	-	85	-	-	-	-	-	<10	3,530
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	85	-	123	-	-	-	-	-	<10	9,660
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	25	-	61	-	-	-	-	-	<10	1,610
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	71	-	65	-	-	-	-	-	-	3,460
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	70	-	54	-	-	-	-	-	-	77,000
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	4	-	8	-	-	-	-	-	-	43,100
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	65	-	<50	-	-	-	-	-	-	17,500
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	75	-	<50	-	-	-	-	-	-	580
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	10	-	60	-	-	-	-	-	-	9,500
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	40	-	51	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	42	-	48	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	36	-	33	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	48	-	80	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	46	-	53	-	-	-	-	-	<10	170
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	47	-	53	-	-	-	-	-	<10	24,000
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	29	-	84	-	-	-	-	-	-	320
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	52	-	64	-	-	-	-	-	-	287,000
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	76	-	214	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	80	-	202	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	90	-	162	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	90	-	184	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	82	-	165	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	87	-	167	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	88	-	148	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	75	-	115	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	4	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	2	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	3	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	1	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	11	-	53	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	18	-	245	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	14	-	10	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	13	-	<5	-	-	-	-	-	<10	5,260
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	15	-	10	-	-	-	-	-	<10	9,080
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	16	-	12	-	-	-	-	-	<10	4,600
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	13	-	15	-	-	-	-	-	-	3,070
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	12	-	14	-	-	-	-	-	-	19,300

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	14	-	15	-	-	-	-	-	-	3,060
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	35	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	32	-	6	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	24	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	11	16	<5	-	-	-	-	-	-	400
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	11	-	<5	-	-	-	-	-	-	3,510
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	39	-	72	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	29	-	20	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	28	-	21	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	22	-	16	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	58	-	6	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	27	-	68	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	29	-	10	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	29	-	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	66	-	203	-	-	-	-	-	-	2,520
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	4	-	8	-	-	-	-	-	-	680
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	4	-	<5	-	-	-	-	-	-	3,320
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	9	292	12	-	-	-	-	-	-	11,900
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	61	-	114	-	-	-	-	-	-	970
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	31	-	30	-	-	-	-	-	-	2,070
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<1	-	<5	-	-	-	-	-	-	800
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	4	104	6	-	-	-	-	-	-	7,860
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	5	234	8	-	-	-	-	-	-	14,200
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	3	-	<5	-	-	-	-	-	-	<10
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	3	-	<5	-	-	-	-	-	-	1,070
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	9	-	26	-	-	-	<10	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	6	<25	<5	2	2	<10	<10	-	-	<560
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	22	74	55	2	1	<10	<10	-	-	<830
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	29	13	11	9	7	<10	<10	-	-	3,060
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	8	12	6	2	1	<10	<10	-	-	<150
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	34	129	112	<1	<1	<10	<10	-	-	610
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	29	13	11	9	7	<10	<10	-	-	3,060
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	25	24	22	5	4	<10	<10	-	-	80
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	42	78	71	2	2	<10	<10	-	-	180
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	46	86	77	2	1	<10	<10	-	-	190
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	52	111	92	1	<1	<10	<10	-	-	550
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	56	90	78	1	<1	<10	<10	-	-	1,760
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	39	82	58	2	1	<10	<10	-	-	240
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	41	83	62	1	1	<10	<10	-	-	270
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	9	33	-	2	2	-	-	-	-	1,320
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	8	34	<5	3	7	<10	<10	-	-	1,000
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	7	52	5	3	2	<10	<10	-	-	2,520
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	4	17	<5	2	1	<10	<10	-	-	840
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	4	8	<5	1	1	<10	<10	-	-	460
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	3	11	<5	<1	<1	<10	<10	-	-	330

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nickel (filtered)	Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent)	Chromium (hexavalent) (filtered)	Aluminium
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	5	5			10	10	10	10	10
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		11	8	8			11	11	1	1	55
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1		15	15					1	1	80
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	3	12	<5	8	7	<10	<10	-	-	550
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	8	23	<5	7	<1	<10	<10	-	-	290
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	2	188	<5	5	6	20	<10	-	-	23,800
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	17	33	21	-	-	<1	<1	-	-	1,600
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	42	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	42	-	44	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	20	16	25	23	18	2	4	-	-	340
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	7.8	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	50	-	9	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	16	-	8	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	27	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	46	-	29	<5	<5	<1	<1	-	-	240
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	62	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	16	-	9	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	57	-	29	-	-	-	-	-	-	2,600
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	88	242	3,140	-	-	-	-	-	-	9,070
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	199	-	217	-	<1	-	20	-	<10	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	139	-	235	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	107	-	207	-	-	-	-	-	-	56,500
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	109	-	207	-	-	-	-	-	-	97,200
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	82	-	154	-	-	-	-	-	-	9,400
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	2	-	<5	-	14	-	<10	-	<10	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	137	-	214	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	3	-	<5	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	3	-	<5	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	39	-	30	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	185	-	20	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	22	-	191	-	-	-	-	-	<10	190
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	29	-	134	-	-	-	-	-	<10	690
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	37	180	120	-	-	-	-	-	-	4,000
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	20	-	91	-	-	-	-	-	-	630
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	32	-	119	-	-	-	-	-	-	890
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	38	-	112	-	-	-	-	-	-	8,400
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	8	-	<5	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	180	-	62	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	4	-	16	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	19	-	120	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	5	-	43	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	7	-	35	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	6	-	61	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	9	-	87	-	-	-	-	-	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1	80									

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	6,550	-	-	-	-	-	-	-	<10	362
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	7,540	-	-	-	-	-	-	-	-	360
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	7,040	-	-	-	-	-	-	-	-	338
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	<10	65
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	<10	66
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<50	-	-	-	-	-	-	-	-	68
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	<10	102
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	10	-	-	-	-	-	-	-	<10	4
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	<10
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	7
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	18
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	70	-	-	-	-	-	-	-	-	168
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	82
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<50	-	-	-	-	-	-	-	-	140
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	50	-	-	-	-	-	-	-	-	18
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	<10	-	7,080	12,200	<1	<1	<50	50	-	2
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	<10	-	13,200	12,000	<1	<1	<50	70	-	2
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	<10	-	12,600	12,500	<1	<1	50	60	-	4
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	<10	-	18,000	16,500	<1	<1	60	<50	-	3
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	50	-	102	76	<1	<1	<50	<50	-	<1
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	30	-	117	78	<1	<1	<50	<50	-	2
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<10	-	172	154	<1	<1	<50	<50	-	9
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	10	-	88	66	<1	<1	90	70	-	6
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<50	-	250	180	<1	<1	70	100	-	5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	30	-	160	170	<0.5	<0.5	50	60	-	3
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<50	-	240	180	<1	<1	60	80	-	5
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<50	-	-	-	-	-	-	-	-	2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	5
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	34
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	<10	-	-	-	-	-	-	-	<10	41
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	20	-	53	50	<1	<1	<50	<50	-	240
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	<10	-	71	48	<1	<1	<50	<50	-	177
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	10	-	55	41	<1	<1	<50	<50	-	282
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	90	-	74	45	1	1	<50	<50	-	294
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	<10	-	176	143	<1	<1	<50	<50	-	6
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<10	-	156	152	<1	<1	<50	<50	-	5
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	<10	-	98	108	<1	<1	<50	<50	-	4
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	10	-	94	74	<1	<1	<50	<50	-	6
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	<10	-	40	39	<1	<1	<50	<50	-	2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	160	-	-	-	-	-	-	-	-	15
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	320	-	-	-	-	-	-	-	-	859
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	130	-	-	-	-	-	-	-	-	14
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	110	-	-	-	-	-	-	-	-	12
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	17

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	<10	-	-	-	-	-	-	-	-	187
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	10
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	20	-	124	119	<1	<1	<50	<50	-	21
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	<10	-	122	71	<1	<1	<50	<50	-	20
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	<10	-	119	101	<1	<1	60	80	-	13
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	<10	-	104	102	<1	<1	<50	<50	-	15
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<10	-	111	103	<1	<1	<50	<50	-	14
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	30	-	70	59	<1	<1	<50	<50	-	57
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	20	-	68	70	<1	<1	<50	<50	-	91
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	100	-	137	129	<1	<1	<50	<50	-	91
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<10	-	55	54	<1	<1	<50	<50	-	12
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<50	-	170	130	<1	<1	70	90	-	81
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	110
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<50	-	170	170	<1	<1	60	60	-	110
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	300	-	48	45	9	8	<50	<50	-	825
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	40	-	51	43	4	4	<50	<50	-	1,180
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	450	-	-	-	-	-	-	-	-	1,800
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	370	-	-	-	-	-	-	-	-	1,220
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<50	-	70	60	<1	<1	120	90	-	170
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	20	-	56	41	<0.5	<0.5	20	<20	-	68
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	90	-	50	50	<1	<1	<50	<50	-	63
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	60	50	<1	<1	<50	<50	-	63
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	<10	-	2,160	2,180	<1	<1	<50	<50	-	98
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	20	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	20	-	-	-	-	-	-	-	-	149
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<10	-	2,180	2,150	<1	<1	<50	<50	-	102
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	<10	-	2,160	2,180	<1	<1	<50	<50	-	98
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	<10	-	3,210	3,100	<1	<1	<50	<50	-	122
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	10	-	1,070	1,000	<1	<1	<50	<50	-	91
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	20	-	1,060	927	<1	<1	<50	<50	-	91
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<10	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	240	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	<10	-	13,000	5,590	<1	<1	60	90	-	38
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	<10	-	6,980	5,930	<1	<1	70	70	-	17
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	<10	-	7,890	8,730	<1	<1	50	50	-	4
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<10	-	8,770	9,060	<1	<1	70	50	-	4
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<10	-	21,100	22,000	<1	<1	70	80	-	6
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<10	-	21,500	21,600	<1	<1	90	<50	-	6
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<10	-	24,200	22,400	<1	<1	140	70	-	4
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	<10	-	28,300	23,300	<1	<1	80	70	-	3
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	<10	-	213	196	<1	<1	<50	<50	-	10
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	<10	-	140	139	<1	<1	130	<50	-	5
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<10	-	155	117	<1	<1	<50	<50	-	4
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	<10	-	46,700	52,500	<1	<1	<50	<50	-	10
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	<10	-	45,500	41,400	<1	<1	50	50	-	7
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	<10	-	55,000	43,700	<1	<1	<50	<50	-	6
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	67,000	37,400	-	-	70	-	-	5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	40	-	-	-	-	-	-	-	<10	5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	70	-	-	-	-	-	-	-	-	3
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<10	-	109	96	<1	<1	<50	<50	-	6
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	<10	-	97	92	<1	<1	<50	<50	-	4
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	<10	-	75	70	<1	<1	<50	<50	-	4
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	<10	-	78	70	<1	<1	<50	<50	-	4
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	<10	-	50	49	<1	<1	<50	<50	-	2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<10	-	60,100	47,200	<1	<1	100	100	-	4
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	20	-	19,500	16,300	<1	<1	150	170	-	1
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	30	-	24,500	8,870	<1	<1	100	90	-	<1
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	<10	-	10,800	11,300	<1	<1	70	60	-	<1
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<10	-	102	92	<1	<1	60	60	-	1
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	30	-	45	45	<1	<1	<50	<50	-	<1
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<10	-	134	123	<1	<1	<50	<50	-	4
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<10	-	82	51	<1	<1	50	<50	-	<1
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	20	-	2,840	2,780	<1	<1	<50	<50	-	8
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	<10	-	1,640	1,610	<1	<1	<50	<50	-	<1
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	7
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	6
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	15
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	<10	-	178	106	<1	<1	100	70	-	6
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<10	-	92	74	<1	<1	220	220	-	5
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<10	-	125	76	<1	<1	160	210	-	5
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	<10	-	80	73	<1	<1	150	140	-	5
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<10	-	286	113	<1	<1	140	120	-	4
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<50	-	30	30	<1	<1	100	90	-	3
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	<50	-	60	30	<1	<1	-	-	-	7
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	10	-	-	-	-	-	-	-	<10	114
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	30	-	-	-	-	-	-	-	-	173
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	76
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	1,580	-	-	-	-	-	-	-	<10	150
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	1,900	-	-	-	-	-	-	-	-	138
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	1,010	-	-	-	-	-	-	-	<10	102
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	880	-	-	-	-	-	-	-	-	86
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	1,020	-	-	-	-	-	-	-	-	102
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	2,880	-	-	-	-	-	-	-	-	110
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	270	-	-	-	-	-	-	-	<10	610
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	510	-	-	-	-	-	-	-	<10	695
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<10	-	-	-	-	<10	-	-	<10	6
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<10	-	-	-	-	-	-	-	-	19
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	9
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<100	-	-	-	-	-	-	-	-	<10
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	<10
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	<10
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	<10
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	2,260	-	-	-	-	-	-	-	-	290
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<10	-	-	-	-	-	-	-	-	28
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<10	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<10	-	202	198	<1	<1	<50	60	-	46
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<10	-	115	123	<1	<1	60	70	-	27
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	120	-	50	38	<1	<1	<50	<50	-	6
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	280	-	69	44	<1	<1	<50	<50	-	17
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<10	-	3,980	971	<1	<1	60	<50	-	4
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	<10	-	1,090	613	<1	<1	100	100	-	1

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	40	-	1,720	965	<1	<1	100	130	-	1
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<10	-	3,020	972	<1	<1	80	80	-	2
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	110	-	1,490	938	<1	<1	70	120	-	2
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<10	-	3,330	2,130	<1	<1	70	80	-	2
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<10	-	449	158	3	2	<50	<50	-	555
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	110	-	250	118	4	3	<50	<50	-	482
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	40	-	125	100	2	2	<50	<50	-	473
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	520	-	138	130	9	6	<50	<50	-	617
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	2,360	-	103	89	12	15	<50	<50	-	629
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	1,510	-	88	82	8	7	<50	<50	-	544
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	2,000	-	93	80	12	10	<50	<50	-	858
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	1,740	-	110	84	11	10	<50	<50	-	638
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	1,300	-	76	73	10	10	<50	<50	-	760
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	100	-	<1	-	70	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	50	50	3	3	<50	<50	-	940
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<50	-	70	50	<1	<1	<50	<50	-	230
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	88	63	3	3	20	20	-	600
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	70	60	2	2	<50	<50	-	390
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	80	60	3	2	<50	<50	-	400
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	90	-	-	-	-	-	-	-	<10	324
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	70	-	-	-	-	-	-	-	-	396
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	170	-	90	80	1	1	<50	<50	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	90	80	1	1	<50	<50	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	5
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	650	-	-	-	-	-	-	-	-	91
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	9

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	11
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	4
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	8
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	4
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	40	-	-	-	-	-	-	-	<10	30
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	110	-	-	-	-	-	-	-	<100	40
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	26
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	240	-	-	-	-	-	-	-	-	14
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	20	-	-	-	-	-	-	-	-	25
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	30	-	-	-	-	-	-	-	-	24
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	50	-	-	-	-	-	-	-	<10	36
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	40	-	-	-	-	-	-	-	-	34
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	60	-	-	-	-	-	-	-	<10	25
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	50	-	-	-	-	-	-	-	<10	25
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<50	-	-	-	-	-	-	-	-	14
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	40	-	-	-	-	-	-	-	<10	<1
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	20	-	-	-	-	-	-	-	-	2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	20	-	-	-	-	-	-	-	-	2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	20	-	-	-	-	-	-	-	-	188
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	20	-	-	-	-	-	-	-	-	172
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	20	-	-	-	-	-	-	-	-	177
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	20	-	-	-	-	-	-	-	-	267
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	3,690	-	-	-	-	-	-	-	<10	824
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	6,380	-	-	-	-	-	-	-	-	868
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	14,700	-	-	-	-	-	-	-	<10	918
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	1,830	-	-	-	-	-	-	-	<10	104
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	2,100	-	-	-	-	-	-	-	-	110
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	1,850	-	-	-	-	-	-	-	<10	110
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	1,550	-	-	-	-	-	-	-	-	114
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	1,520	-	-	-	-	-	-	-	<10	101
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<10	-	-	-	-	-	-	-	<10	2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	30	-	-	-	-	-	-	-	-	12
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	<10	9
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<10	-	-	-	-	-	-	-	-	118

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<10	-	-	-	-	-	-	-	-	125
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<10	-	-	-	-	-	-	-	-	210
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	60	-	-	-	-	-	-	-	-	488
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<10	-	-	-	-	-	-	-	-	331
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	20	-	-	-	-	-	-	-	-	166
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	-	168
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	70	-	-	-	-	-	-	-	-	227
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	1,020
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	123
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	208
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	201
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	30	-	-	-	-	-	-	-	-	212
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	30	-	-	-	-	-	-	-	<10	315
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	318
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	60	-	-	-	-	-	-	-	<10	31
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	450	-	-	-	-	-	-	-	-	329
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	-	334
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	115
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	540	-	-	-	-	-	-	-	-	305
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<100	-	-	-	-	-	-	-	-	322
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	13
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	170	-	-	-	-	-	-	-	<10	340
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	20	-	-	-	-	-	-	-	<10	352
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	10	-	-	-	-	-	-	-	-	297
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	<10	-	-	-	-	-	-	-	-	893
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<10	-	-	-	-	-	-	-	<10	34
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	80	-	-	-	-	-	-	-	<10	42
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	40	-	-	-	-	-	-	-	<10	38
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	21
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	85

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	20
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<10	-	-	-	-	-	-	-	-	2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	40	-	-	-	-	-	-	-	-	11
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	1,300	-	-	-	-	-	-	-	-	296
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	10	-	-	-	-	-	-	-	-	6
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<10	-	-	-	-	-	-	-	-	26
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<10	-	-	-	-	-	-	-	-	41
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	310	-	-	-	-	-	-	-	-	260
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<10	-	-	-	-	-	-	-	-	149
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<10	-	-	-	-	-	-	-	-	2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<10	-	-	-	-	-	-	-	-	18
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	10	-	-	-	-	-	-	-	-	128
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<10	-	-	-	-	-	-	-	-	2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	10	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	<10	-	1,290	122	<1	<1	<50	60	-	15
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	<10	-	449	152	<1	<1	<50	50	-	42
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	20	-	100	99	3	2	50	50	-	104
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<10	-	212	115	<1	<1	<60	<50	-	30
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	80	-	357	40	2	2	<50	<50	-	50
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	20	-	100	99	3	2	<50	<50	-	104
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	20	-	72	68	2	2	<50	<50	-	101
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	170	-	65	60	9	9	<50	<50	-	145
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	170	-	70	64	9	8	<50	<50	-	152
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	180	-	67	58	12	10	<50	<50	-	178
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	60	-	92	70	6	6	<50	<50	-	180
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	40	-	60	62	6	4	<50	<50	-	139
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	40	-	60	63	8	4	<50	<50	-	145
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	5,920	2,110	-	-	60	100	-	25
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	<10	-	5,070	2,240	<1	<1	50	90	-	22
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	<10	-	6,080	1,920	<1	<1	80	70	-	25
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<10	-	3,250	1,160	<1	<1	60	60	-	18
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	<10	-	2,300	1,600	<1	<1	70	50	-	15
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	10	-	5,040	4,570	<1	<1	<50	<50	-	7

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	10								10	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		55	24					370	370		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	80									
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	20	-	29	13	<1	<1	<50	<50	-	<1
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	<10	-	60	106	<1	<1	<50	<50	-	4
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	10	-	996	38	3	<1	80	<50	-	21
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	50	-	190	180	<1	<1	120	120	-	9
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	18
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<50	-	390	350	<1	<1	80	110	-	11
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	22
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	<50	-	220	230	<1	<1	70	70	-	34
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	35
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<10	-	-	-	-	-	-	-	-	141
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<10	-	-	-	-	-	-	-	-	161
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	1,370	-	-	127	-	8	-	<50	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	3,040	-	-	-	-	-	-	-	-	266
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	2,650	-	-	-	-	-	-	-	-	308
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	2,010	-	-	-	-	-	-	-	-	214
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	20	-	-	37	-	<1	-	<50	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	10	-	-	-	-	-	-	-	<10	59
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	<10	-	-	-	-	-	-	-	<10	60
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	770	-	-	-	-	-	-	-	-	110
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	70	-	-	-	-	-	-	-	-	91
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	670	-	-	-	-	-	-	-	-	87
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	270	-	-	-	-	-	-	-	-	107
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	<0.1	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	<0.5	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	4	1,540	1,450	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	326	5,640	4,820	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	331	5,300	4,590	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	343	5,420	5,210	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	57	1,530	1,460	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	54	1,550	1,460	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	50	1,700	1,600	-	-	-	-	<1	<1	<1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	52	2,000	1,190	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	4	290	254	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<10	434	267	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<1	570	92	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<1	537	13	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	7	4,700	511	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	6	2,940	468	-	-	-	-	<1	<2	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	7	4,500	490	-	-	-	-	<1	<1	<1
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	6	1,420	439	-	-	-	-	<1	<2	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	2	411	223	10,500	11,200	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	<1	419	384	12,700	12,200	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	3	207	199	12,500	12,400	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	1	170	152	13,600	13,500	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	<1	54	6	348	325	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	<1	326	170	169	178	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	4	1,710	1,430	235	240	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	2	334	209	420	402	<10	<10	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	3	670	570	4,900	4,400	15	15	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	3	610	620	4,200	4,400	1	1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	3	630	590	4,700	4,400	19	19	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	720	-	-	-	-	-	<1	<1	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	720	-	-	-	-	-	<1	<1	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<1	148	76	-	-	-	-	<1	<2	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<1	126	73	-	-	-	-	<1	<2	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	180	74	-	-	-	-	<1	<1	<1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	<1	394	111	-	-	-	-	<1	<2	<2
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	2	3,080	454	-	-	-	-	<1	<2	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	<1	2,420	265	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	230	5,210	4,710	2,640	2,640	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	172	3,480	3,280	1,840	1,860	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	258	4,860	4,950	2,320	2,310	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	327	5,420	5,170	1,930	2,100	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	3	726	629	5,700	5,130	10	<10	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	4	1,320	1,330	5,380	5,630	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	4	1,060	1,200	5,590	5,510	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	5	752	751	7,100	7,390	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	2	680	651	7,250	7,240	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	2	933	577	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	855	4,640	3,360	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	3	906	655	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	3	955	649	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	6	289	148	-	-	-	-	<1	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	4	1,350	537	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<10	360	301	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	17	678	694	11,800	11,200	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	4	645	362	10,700	5,260	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	12	681	654	9,480	8,650	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	9	607	628	9,980	10,000	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	9	645	634	9,460	9,590	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	81	2,380	1,810	7,470	5,810	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	52	2,150	2,100	6,360	7,100	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	84	1,100	988	1,010	905	<10	<10	<1	<2	<2
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	11	275	278	123	162	<10	<10	<1	<2	<2
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	73	3,800	3,300	2,600	2,400	26	20	<1	2	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	5,200	-	-	-	-	-	<1	5	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	110	26,000	23,000	10,000	9,800	<5	<5	<1	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	785	9,990	9,730	3,790	3,720	<10	<10	<1	<2	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	1,110	14,400	13,500	3,380	3,220	<10	<10	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	1,160	9,960	6,540	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	870	9,920	3,560	-	-	-	-	<1	<2	<2
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	140	8,600	6,300	6,000	4,400	<5	<5	<1	1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	53	1,500	1,100	820	600	3	<1	<1	100	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	55	1,300	1,200	760	710	<5	<5	<2	84	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	58	1,300	1,200	760	700	<5	<5	<2	78	<2
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	94	2,950	2,840	850	822	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	149	-	6,410	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	149	6,410	6,410	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	102	2,940	3,340	848	827	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	94	2,950	2,840	850	822	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	114	7,840	7,920	1,420	1,410	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	84	7,470	6,730	723	761	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	78	7,500	6,190	708	704	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<1	<1	<1	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<1	2	2	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	22	607	397	31,200	27,700	30	<10	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	15	474	393	28,400	28,500	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	1	416	421	29,600	29,200	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<1	431	412	28,200	24,800	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	6	300	278	8,790	9,240	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	5	262	207	8,670	8,600	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	4	218	184	8,950	8,310	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	3	149	149	9,250	9,070	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	7	986	880	367	358	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	4	453	532	345	343	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	3	315	328	231	254	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	11	456	452	18,400	20,500	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	6	399	372	17,800	17,300	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	4	260	218	21,500	16,800	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	4	216	194	22,800	15,300	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	2	809	406	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	5	571	679	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	5	449	367	1,960	2,060	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	4	370	355	1,730	1,660	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	4	351	306	1,920	1,830	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	4	344	315	2,020	1,900	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	1	128	85	2,360	2,210	<10	<10	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	1	921	862	36,400	36,100	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	<1	787	748	38,100	34,900	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<1	796	697	36,600	32,700	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	<1	648	625	33,400	34,400	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<1	591	572	13,800	12,600	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	<1	198	213	3,790	3,760	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	4	547	455	3,720	3,350	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<1	386	57	7,020	2,160	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	7	7	<1	12,900	12,900	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	<1	4	<1	12,100	11,600	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	2	84	31	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	5	79	60	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	7	126	77	-	-	-	-	<1	<2	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	5	470	467	29,100	23,800	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	4	1,040	938	19,300	20,300	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	3	1,020	1,100	18,100	17,000	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	4	1,120	1,010	18,300	18,800	<10	<10	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	1	1,570	1,490	22,700	23,000	<10	<10	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	3	320	290	14,000	14,000	<5	<5	<1	<1	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	3	780	400	17,000	15,000	<5	<5	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	109	3,720	3,760	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	143	4,950	4,970	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	60	2,720	2,240	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	132	291	125	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	128	111	74	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	101	184	170	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	72	170	170	-	-	-	-	<1	<1	<1
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	101	171	192	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	92	170	166	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	565	9,620	8,800	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	669	9,780	9,350	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	5	575	526	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	8	721	648	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	8	861	776	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<10	116	20	-	-	-	-	1	4	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<10	197	<10	-	-	-	-	1	3	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<10	521	492	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<10	575	383	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	276	734	697	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	28	596	596	-	-	-	-	<1	56	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	28	-	596	-	-	-	-	<1	51	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	45	1,080	1,090	11,300	12,400	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	29	787	803	10,500	10,300	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	5	124	109	362	339	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	11	395	250	1,440	962	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	3	800	851	25,500	20,800	<10	<10	<1	5	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	<1	1,060	1,000	23,400	24,800	<10	<10	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<1	1,030	1,000	31,300	29,100	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<1	1,110	980	27,000	28,600	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	3	994	999	26,500	24,900	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<1	706	671	28,000	25,700	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	511	692	669	3,050	3,460	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	448	578	540	3,360	3,220	20	10	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	441	460	384	3,360	2,960	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	647	350	320	2,700	2,780	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	719	636	755	1,320	1,810	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	504	489	473	1,090	1,030	10	10	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	527	506	451	1,890	1,130	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	635	670	480	1,280	1,260	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	734	737	804	1,880	1,880	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	<1	2	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	870	43,000	43,000	1,900	2,000	<5	<5	<1	49	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	220	6,900	7,300	4,700	5,000	<5	<5	<1	4	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	540	4,000	5,400	3,900	4,000	4	<1	<1	8	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	380	2,800	3,700	3,600	4,200	<5	<5	<1	8	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	370	2,800	3,600	3,700	4,200	<5	<5	<1	8	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	366	555	1,520	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	307	1,190	735	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	2,300	-	2,400	2,200	<5	<5	<1	3	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	2,300	1,900	2,400	2,200	<5	<5	<1	3	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	5	-	397	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	460	-	-	-	-	-	<1	<1	<1
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	55	-	214	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	35	-	1,130	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	35	-	1,100	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	25	-	870	-	-	-	-	<1	<1	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	9	-	155	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	47	-	1,090	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	72	-	776	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<1	-	<1	-	-	-	-	<1	<2	<2
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	116	243	232	-	-	-	-	<1	<2	<2
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	2	128	76	-	-	-	-	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	3	151	84	-	-	-	-	<5	<5	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	3	121	83	-	-	-	-	<5	<5	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	2	92	39	-	-	-	-	<5	<5	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<1	118	29	-	-	-	-	<5	<5	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<1	100	26	-	-	-	-	<5	<5	<5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	26	533	426	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	26	673	393	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	26	442	537	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	13	93	59	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	23	417	371	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	24	423	376	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	25	393	260	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	30	380	301	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	18	233	178	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	17	219	157	-	-	-	-	<1	<2	<2
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	17	160	160	-	-	-	-	<1	<1	<1
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<1	4	2	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<1	13	13	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<1	60	1	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<1	67	<1	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	220	2,470	2,850	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	202	2,480	2,560	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	202	2,540	2,560	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	249	3,110	3,130	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	795	4,960	4,670	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	894	5,570	5,490	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	867	5,360	5,090	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	109	20	23	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	98	42	<50	-	-	-	-	<1	<1	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	111	38	23	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	107	44	17	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	92	17	14	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	1	188	124	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	5	1,010	412	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<1	1,220	134	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	110	2,160	1,640	-	-	-	-	<1	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	111	2,140	1,630	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	98	3,800	1,520	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	76	8,900	1,020	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	56	7,170	833	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	106	3,490	1,570	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	169	3,930	3,520	-	-	-	-	<1	<2	3
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	136	5,630	2,340	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	147	29,400	2,440	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	116	2,570	2,410	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	108	4,570	2,760	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	105	4,550	2,740	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	119	4,990	2,660	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	8	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	297	2,280	2,130	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	297	2,210	2,050	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	96	200	574	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	314	1,860	1,360	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	326	2,150	1,570	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	14	638	117	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	270	1,830	1,420	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	282	2,010	1,780	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	34	92	186	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	2	<2	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	21,500	-	-	-	-	1	<2	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	22,300	-	-	-	-	2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	336	22,100	22,000	-	-	-	-	2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	334	20,600	21,800	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	154	18,500	8,690	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	298	42,800	18,800	-	-	-	-	1	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	2,650	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	3,010	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	2,290	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	2,490	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	3,060	-	-	-	-	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	3,450	-	-	-	-	<20	<20	<20
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	735	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	722	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	645	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	572	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	663	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	27	1,910	1,150	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	36	1,500	1,300	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	24	2,180	1,090	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	25	1,250	1,050	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	26	4,960	1,010	-	-	-	-	<1	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	24	1,150	1,040	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<1	32	35	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<1	94	26	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	<1	7	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	<1	4	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	<1	4	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	<1	6	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	260	251	219	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	2	422	294	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	4	2,870	342	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	6	2,680	294	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	236	252	195	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	131	4,180	3,040	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<1	692	565	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	1	1,120	669	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	1	3,540	687	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<1	2	<1	-	-	-	-	<1	<2	<2
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<1	84	<1	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	20	-	1,530	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	16	1,380	1,520	15,400	15,200	<10	<10	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	37	2,870	2,850	13,700	15,200	<10	<10	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	102	1,850	1,870	1,790	1,820	<10	<10	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	26	1,800	1,760	16,800	16,800	<10	<10	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	45	867	751	3,110	2,670	<10	<10	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	102	1,850	1,870	1,790	1,820	<10	<10	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	93	1,970	1,880	1,380	1,270	<10	<10	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	131	980	1,000	1,110	1,050	<10	<10	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	140	940	959	1,130	1,110	<10	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	152	792	747	1,200	1,100	<10	<10	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	170	944	875	1,360	1,270	<10	<10	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	118	860	919	1,010	943	<10	<10	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	126	822	921	1,040	996	<10	<10	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	25	813	864	6,150	6,910	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	26	737	833	5,140	6,040	<10	<10	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	21	807	707	6,830	7,130	10	<10	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	13	680	617	5,440	4,880	<10	<10	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	15	614	633	4,820	4,610	<10	<10	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	8	352	397	3,020	3,750	<10	<10	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium	Vanadium (filtered)	Benzene	Toluene	Ethylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1					1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			1,900	1,900					950	180	80
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<1	6	2	95	81	<10	<10	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	34	127	215	309	1,100	<10	<10	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<1	222	41	803	230	10	<10	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	9	1,000	1,000	12,000	12,000	5	<5	<1	<1	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	1,400	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	10	450	410	16,000	15,000	16	19	<1	2	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	960	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	<1	<1	<1
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	34	6,600	6,400	7,400	7,300	<5	<5	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	6,700	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	155	2,990	3,370	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	212	3,720	3,650	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	278	-	811	-	3,030	-	<10	<1	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	210	497	434	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	222	590	383	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	166	385	287	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<1	-	21	-	251	-	<10	<1	<2	<2
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	3	-	452	-	-	-	-	<1	<2	<2
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	16	-	2,090	-	-	-	-	<1	<2	<2
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	56	223	214	-	-	-	-	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	57	225	215	-	-	-	-	<1	<2	<2
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	110	360	260	-	-	-	-	<1	<1	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	52	168	154	-	-	-	-	<1	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	96	239	131	-	-	-	-	<1	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	103	267	282	-	-	-	-	<1	<2	<2
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	3	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	2	<1
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<1	<1	<1

	BTEX																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	320	<50	<100
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	390	<50	<100
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	<2	<3	<10	-	-	2,100	190	400
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	130	<50	<100
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<1	<2	<3	<10	-	-	<20	<50	<100
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<2	<3	-	-	-	<20	<50	<100
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<1	<2	-	-	-	-	<10	<50	<100
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<2	<3	-	-	-	<20	<50	<100
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<2	<3	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<2	<3	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	<2	<3	<10	-	-	<20	<50	<100
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2	<2	<2	<5	-	<1	<20	<50	<100
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	60	1,480	1,060
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<2	<2	<2	-	-	<1	<20	<50	260	270
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<2	<2	<2	-	-	<1	<20	<50	150	120
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<2	<3	-	-	-	<20	<50	300	<100
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<2	<3	-	-	-	<20	190	<100	<100
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<2	<3	-	-	-	<20	110	<100	<100
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	<2	-	-	<1	<20	<50	150	110
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<2	<3	-	-	-	<20	<50	2,300	300
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<1	<2	-	-	-	-	-	78	<100	<100
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<2	<4	<6	-	-	-	80	<50	<100	<100
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<2	<4	<6	-	-	-	90	<50	800	<100
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	<2	-	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	<2	<2	<2	-	-	<1	<20	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<2	<2	<2	-	-	<1	<20	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	<2	-	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	-	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	-	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<2	<5	-	<1	<20	280	370	<50
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	<2	<2	<2	<5	-	<1	<20	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<1	<2	<3	<10	-	-	<20	<50	<100	<100
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<2	<2	<2	<5	-	<1	<20	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	<2	<2	<2	<5	-	<1	<20	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<5	-	5	<20	<50	<100	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	4	<20	<50	<100	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<1	<2	<3	<10	-	-	<20	<50	<100	<100
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<2	<2	<2	-	-	56	100	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	<2	-	-	56	100	<50	<100	<50
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	3	3	-	-	8	<20	<50	300	<50
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<2	<3	-	-	-	<20	60	200	<100
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<2	<3	-	-	-	120	<50	<100	<100
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<2	<3	-	-	-	50	<50	<100	<100
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<1	<2	-	-	-	-	34	<50	110	<100
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<2	<3	-	-	-	<20	<50	200	<100
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	<2	<2	-	<1	-	<20	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	50	1,030	<50
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<2	<2	<2	-	<1	-	<20	<50	<100	<50
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	20	<50	<100	<50
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<10	<10	<5	<10	-	<5	2,620	<50	<100	<50
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<10	<10	<5	<10	-	<5	2,690	<50	<100	<50
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<5	<10	-	<5	2,020	<50	<100	<50
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<5	<10	-	<5	2,380	<50	<100	<50
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<10	<10	<5	<10	-	<5	2,700	<50	<100	<50
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<10	<10	<5	<10	-	<5	1,860	<50	<100	<50
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<1	<2	<3	<10	-	-	5,300	<50	<100	<100
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	2,250	<50	<100	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	1,300	<50	<100	<50
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	1,710	<50	<100	<50
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	2,670	<50	<100	<50
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	2,660	<50	<100	<50
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<5	<5	<2	<5	-	<2	2,470	<50	<100	<50
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<1	<2	<3	<10	-	-	<20	70	100	<100
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<1	<2	<3	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<1	<2	<3	<10	-	-	<20	<50	<100	<100
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	2	<2	2	<5	-	5	<20	<50	<100	<50
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	2	<2	2	<5	-	2	<20	90	240	<50
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	4	2	6	<5	-	6	20	130	180	<50
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	2	<20	330	170	<50
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	2	<20	260	<100	<50
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	1	<20	200	<100	<50
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	2	<20	220	<100	<50
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	2	<20	<50	<100	<50
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	<2	<2	<2	<5	-	1	<20	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<50	<50	<25	<50	-	<25	17,300	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<50	<50	<25	<50	-	<25	21,900	<50	<100	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<50	<50	<25	<50	-	<25	26,900	<50	<100	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<50	<50	<25	<50	-	<25	16,100	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<50	<50	<25	<50	-	<25	15,300	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<50	<50	<25	<50	-	<25	21,700	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<50	<50	<25	<50	-	<25	14,100	<50	<100	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<20	<20	<10	<20	-	<10	11,100	<50	<100	<50
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<10	<10	<5	<10	-	<5	1,990	200	<100	<50
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<10	<10	<5	<10	-	<5	1,890	140	<100	<50
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<5	<5	<2	<5	-	<2	1,080	290	130	<50
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<5	<5	<2	<5	-	<2	1,210	210	<100	<50
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<5	<5	<2	<5	-	<2	740	220	230	120
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	70	<50	<100	<50
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	270	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	120	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	80	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	50	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	40	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	190	300	<50
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	110	160	<50
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	110	380	<50
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2	<2	<2	<5	-	<1	20	<50	<100	<50
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<2	<5	-	7	<20	240	940	130
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	<50	<100	<50
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<2	<5	-	4	<20	<50	<100	<50
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<1	<2	<3	<10	-	-	<20	60	100	<100
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<2	<5	-	6	<20	<50	<100	<50
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<5	-	<1	<20	<50	280	110
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	<2	<2	-	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (VOC)	Total BTEX (Calculated)	Total BTEX	C6 - C9	C10 - C14	C15 - C28	C29 - C36
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	2	2	5		1	20	50	100	50
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		350									
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<2	<3	-	-	-	<20	<50	300	<100
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	220	80
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<1	<2	<3	<10	-	-	<20	<50	<100	<100
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<2	<2	<2	-	<1	-	30	<50	<100	<50
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<2	<2	<2	-	<1	-	20	<50	<100	<50
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<5	-	<1	<20	<50	<100	<50
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<2	<2	<2	-	<1	-	<20	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<2	<2	<2	-	<1	-	<20	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<5	<5	<2	<5	-	<2	1,580	<50	<100	<50
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	<2	<2	<2	<5	-	<1	2,340	<50	<100	<50
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	<2	<3	<10	-	-	<20	<50	<100	<100
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	40	<50	<100	<50
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<2	<2	<2	<5	-	<1	30	<50	<100	<50
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<2	<3	-	-	-	<20	<50	<100	<100

	TPH																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<50	<100	320	320	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<50	<100	400	400	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	590	700	2,200	2,200	300	300	400	<100	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	<50	<100	150	150	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<100	<100	<20	<20	<50	<50	<100	<100	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<100	<100	<20	<100	<50	<50	<100	<100	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	<10	<10	<50	<50	<100	<100	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<100	<100	<20	<20	<50	<50	<100	<100	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<100	<100	<20	<20	<50	<50	<100	<100	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<50	<100	20	20	<100	<100	<100	<100	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<50	<100	<20	<20	<100	<100	<100	<100	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	2,600	2,960	<20	<20	<100	<100	2,270	690	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	530	610	<20	<20	<100	<100	450	160	<100	<100
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	270	230	<20	<20	<100	<100	230	<100	<100	<100
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	300	300	<20	<20	<50	<50	300	<100	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	190	170	<20	<100	170	170	<100	<100	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	110	<100	<20	<20	90	90	<100	<100	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	260	230	<20	<20	<100	<100	230	<100	<100	<100
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<50	<100	30	30	<100	<100	<100	<100	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	2,600	2,850	<20	<20	50	50	2,600	200	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	190	87	78	78	<100	<100	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<100	<100	90	<20	<50	<50	<100	<100	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	800	900	100	20	<50	<50	900	<100	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	<20	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	<20	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<50	<100	<20	<20	<100	<100	<100	<100	<100	<100
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	650	680	<20	<20	380	380	300	<100	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<100	<100	<20	<100	<50	<50	<100	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	<20	<20	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	<20	<20	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<100	<100	<20	<20	50	50	<100	<100	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	<20	<20	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	<20	<20	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<50	<100	<20	<20	<100	<100	<100	<100	<100	<100
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<50	<100	20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<100	<100	<20	<20	<50	<50	<100	<100	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	<100	<100
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<50	<100	<20	<20	<100	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	30	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<50	<100	90	30	<100	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	300	280	<20	<20	280	280	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	260	200	20	<20	<50	<50	200	<100	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<100	<100	100	50	<50	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<100	<100	50	50	<50	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	110	77	48	40	77	77	<100	<100	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	200	200	<20	<20	<50	<50	200	<100	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<100	<100	<20	<20	<50	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	<20	<20	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<100	<100	<20	<100	<50	<50	<100	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<100	<100	<20	<20	<50	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	<20	-	-	-	-	<100	<100
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<50	<100	-	<20	-	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<100	<100	-	<20	-	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	<20	-	-	-	-	<100	<100
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<100	<100	-	<20	-	<50	<100	<100	-	<100
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	1,080	1,090	-	<20	-	210	880	<100	<100	150
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<50	<100	-	<20	-	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<50	<100	-	<20	-	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<100	<100	-	<20	-	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<100	<100	-	<20	-	<50	<100	<100	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<50	<100	30	30	<100	<100	<100	<100	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<50	<100	2,990	2,990	<100	<100	<100	<100	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<50	<100	3,060	3,060	<100	<100	<100	<100	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<50	<100	30	30	<100	<100	<100	<100	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<50	<100	2,030	2,030	<100	<100	<100	<100	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<50	<100	2,390	2,390	<100	<100	<100	<100	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<50	<100	2,720	2,720	<100	<100	<100	<100	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<50	<100	1,870	1,870	<100	<100	<100	<100	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<100	<100	5,300	5,300	<50	<50	<100	<100	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<50	<100	2,230	2,230	<100	<100	<100	<100	-	<100

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<50	<100	1,280	1,280	<100	<100	<100	<100	-	<100
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<50	<100	1,690	1,690	<100	<100	<100	<100	-	<100
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<50	<100	2,960	2,960	<100	<100	<100	<100	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<50	<100	2,950	2,950	<100	<100	<100	<100	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<50	<100	2,740	2,740	<100	<100	<100	<100	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	170	100	<20	<20	<50	<50	100	<100	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<50	<100	20	20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<100	100	<20	<20	<50	<50	100	<100	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	330	330	20	<20	220	220	110	<100	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	310	300	20	<20	160	160	140	<100	<100	<100
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	500	490	<20	<20	350	350	140	<100	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	260	280	<20	<20	280	280	<100	<100	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	200	220	<20	<20	220	220	<100	<100	<100	<100
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	220	240	<20	<20	240	240	<100	<100	<100	<100
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<50	<100	17,500	17,500	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<50	<100	22,200	22,200	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<50	<100	26,400	26,400	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<50	<100	15,700	15,700	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<50	<100	15,600	15,600	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<50	<100	22,200	22,200	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<50	<100	14,300	14,300	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<50	<100	11,400	11,400	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	200	230	1,990	1,990	230	230	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	140	160	1,890	1,890	160	160	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	420	340	890	890	340	340	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	210	240	1,040	1,040	240	240	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	570	530	700	700	250	250	280	<100	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<50	<100	70	70	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<50	<100	20	20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<50	<100	270	270	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<50	<100	110	110	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<50	<100	80	80	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<50	<100	50	50	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<50	<100	30	30	<100	<100	<100	<100	-	<100
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<50	<100	40	40	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	490	190	<20	<20	190	190	<100	<100	<100	<100
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	270	220	<20	<20	120	120	100	<100	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	490	450	<20	<20	140	140	310	<100	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<50	<100	30	30	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	1,310	1,340	<20	<20	720	720	620	<100	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<50	<100	-	-	<100	<100	<100	<100	<100	<100
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	160	100	<20	<20	<50	<50	100	<100	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	390	320	<20	<20	<100	<100	320	<100	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	<100	<100
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	>C10 - C16 Fraction minus Naphthalene (F2) (SG)	>C10 - C40 Fraction (sum) (SG)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	50	100	20	20	50	50	100	100	100	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<100	<100	<20	<100	<50	<50	<100	<100	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	300	350	<20	<20	50	50	300	<100	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	300	270	<20	<20	<100	<100	270	<100	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<100	<100	<20	<20	<50	<50	<100	<100	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<100	<100	<20	<20	<50	<50	<100	<100	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<50	<100	-	30	-	<100	<100	<100	<100	<100
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<50	<100	-	<20	-	<100	<100	<100	<100	<100
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<100	<20	<20	<100	<100	<100	<100	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	<20	-	-	-	-	<100	<100
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	<20	-	-	-	-	<100	<100
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<50	<100	1,570	1,570	<100	<100	<100	<100	-	<100
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	<50	<100	2,340	2,340	<100	<100	<100	<100	-	<100
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<100	<100	<20	<20	<50	<50	<100	<100	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<50	<100	40	40	<100	<100	<100	<100	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<50	<100	30	30	<100	<100	<100	<100	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<50	<100	40	40	<100	<100	<100	<100	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<100	-	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	<100	-	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<100	-	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<100	-	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<100	-	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<100	<100	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<100	<100	<20	<20	<50	<50	<100	<100	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<100	<100	<20	<20	<50	-	<100	<100	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	<1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	<100	<100	<100	<50	<50	<100	<50	-	<1
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	<100	<100	<100	<50	<50	<100	<50	-	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	<50	<100	<100	100	<50	100	<100	-	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<50	<100	<100	<100	<50	<100	<100	-	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	<100	<100	<100	<50	<50	<100	<50	-	<1
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	<1.0
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	<50	<100	<100	<100	<50	<100	<100	-	<0.01
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	<1.0
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<20	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<20	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<20	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	<0.01
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	-	<1.0
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	90	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	<100	<100	<100	<50	<50	<100	<50	-	<1
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<50	<100	<100	<100	<50	<100	<100	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<100	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<50	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<50	<50	<100	<100	<100	<50	<100	<100	<20	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	210	<100	150	<100	240	<50	240	<50	<20	<1
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<100	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<100	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<100	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<50	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<100	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<50	-	-	-	-	-	-	-	<20	<1
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	<100	<100	<100	<50	<50	<100	<50	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	>C10-C16	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	Acenaphthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/m³	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		100	100	100	50	50	100	50		1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	<0.01
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	<0.01
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	<0.01
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<100	<100	<100	<100	<50	<50	<100	<50	30	<1
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	<1.0
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<100	<100	<100	<100	<50	<50	<100	<50	<20	<1
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	<20	<1
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	<100	<100	<100	<50	<50	<100	<50	<20	<1
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-	<1.0
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	<100	<100	<100	<50	<50	<100	<50	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<1
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.01
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.01
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.01
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<1
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<1	<1	<1	<1	<1	<1	<1	1	<1
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2016	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.4					1.4		2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.2
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.05	<0.01	<0.1	<0.01	<0.01	<0.01	0.01	0.02
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	PAH							Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *			µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1				1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			16		0.2								
AS2159 – 2009 Piling – Design and Installation																			
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)							1												

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	1.5	1.5	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	1.1	1.1	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	<1	-	<1	<1	<1	-	<1	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	<2	<2	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	<2	<2	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	2	1	-	<1	<1	<1	-	<1	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<1	-	<1	<1	<1	-	<1	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	<1	<5	<1	-	-	-	<1	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<1	-	<1	<1	<1	-	<1	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	<1	-	<1	<1	<1	-	<1	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	<4

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<0.5	<1	-	<0.5	<1	<1	<0.5	<1	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<0.5	<1	-	<0.5	<1	<1	<0.5	<1	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<1	-	<1	<1	<1	-	<1	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	-	<1	<1	<1	-	<1	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<0.5	<1	-	<0.5	<1	<1	<0.5	<1	-	<4
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	0.03	<0.05	<0.01	-	-	-	<0.01	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	0.07	0.05	-	<0.01	<0.01	<0.01	-	0.02	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	0.1	0.08	-	<0.01	<0.01	<0.01	-	0.02	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	<1	-	<0.5	<1	<1	-	<1	<0.5	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	<1	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	<1	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	<1	-	<0.5	<1	<1	-	<1	<0.5	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	<1	-	<0.5	<1	<1	-	<1	<0.5	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<0.5	<1	-	<0.5	<1	<1	<0.5	<1	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.5	<1	-	<0.5	<1	<1	-	<1	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.5	<1	-	<0.5	<1	<1	-	<1	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	-	<2	-	-	-	<2	-	<4
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	<1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	<1	-	<0.5	<1	<1	-	<1	<0.5	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<0.5	<1	-	<0.5	<1	<1	<0.5	<1	-	<4
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	<1	<0.05	<0.01	-	-	-	<0.01	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	-	<1	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.5	<5	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<1	<10	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	<10	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.5	-	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<1	<10	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.5	-	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<1	-	-	-	<1	<1	-	<1	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	<2	-	<2	<2	<2	-	<2	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	3	3	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2016	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	<1	-	<0.5	<1	<1	-	<1	<0.5	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	PAHs (Sum of total)	Naphthalene	Benzo(a)pyrene TEQ	Benzo(a) pyrene	Benzo(k)fluoranthene	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ (lower bound) *	Fluorene	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	1		0.5	1	1		1	0.5	4
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			16		0.2						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	0.07	0.04	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	0.23	0.03	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.5	<5	-	-	<1	<1	-	<1	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.5	<5	-	-	<1	<1	-	<1	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	-	<2	-	<4
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.5	<5	-	-	<1	<1	-	<1	-	<4
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.5	<1.0	-	<0.5	<1.0	<1.0	-	<1.0	-	<4
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<10	-	<1	<1	<1	-	<1	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<1	-	<1	<1	<1	-	<1	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<0.1	<10	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<0.01	<10	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.01	<10	-	<0.01	<0.01	<0.01	-	<0.01	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	<10	-	<1	<1	<1	-	<1	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<10	-	<0.01	<0.01	<0.01	-	<0.01	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	<5	<5	<5	<5	<5	<10	<3	<3
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	<5	<5	<5	<5	<50	<10	<3	<3
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	<5	<5	<5	<5	<5	<10	<3	<3
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	<5	<5	<5	<5	<5	<10	<3	<3
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	<5	<5	<5	<5	<5	<10	-	<3
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	<5	<2	<2	<2	<2	<10	-	<3
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	<0.5	-	-	-	-	-	<1.0	<1.0	<1.0
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<1	<1	<1
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<1	<1	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	<0.5	-	<2	<2	<2	<2	<1	<1	<1
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	<0.5	-	-	-	-	-	<1	<1	<1
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	<0.5	-	-	-	-	-	<1	<1	<1
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	<5	<5	<5	<5	<5	<10	<3	<3
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<1	<1	<1
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<1	<0.5	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<1	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	-	<5	<5	<5	<5	<5	<10	-	<3
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<1	<0.5	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	<5	<5	<5	<5	<5	<20	<6	<6
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	<5	<5	<5	<5	<500	<10	<3	<3
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	<5	<5	<5	<5	<50	<10	<3	<3
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<1	<1	<1
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Naphthalene-PAH	Benzo(a)pyrene TEQ calc (Zero)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		0.5	5	2	2	2	2	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									20	160	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<1	<0.5	-	<2	<2	<2	<2	<2	-	<2
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	<0.5	-	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	<5	<5	<5	<5	<5	<10	<3	<3
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	-	-	<10	-	<3
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<10	-	<3
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<10	-	<3
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	0.02	-	-	-	-	-	-	<1	-	<0.5
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<0.01	-	-	-	-	-	-	<10	<3	<3
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.01	-	-	-	-	-	-	<0.1	<0.05	<0.05
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	-	-	<10	<3	<3
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	-	-	-	-	-	-	<0.1	<0.05	<0.05

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenols				
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2							10	320	490			45
AS2159 – 2009 Piling – Design and Installation																		
PFAS NEMP 2020 Freshwater 99%																		
WSA SBT - EPL 21672 (amended 10 May 2023)							1											

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<3	<10	<10	<6	<10	<10	<3	<3	<3
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<3	<10	<10	<6	<10	<10	<3	<3	<3
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<3	<10	<10	-	<10	<10	<3	<3	<3
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<3	<10	<10	<6	<10	<10	<3	<3	<3
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2	<2	<2	<4	<2	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<3	-	<10	-	<10	<10	<3	<3	<3	<30
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	<2	-	<2	<4	<2	<2	<2	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<3	-	<10	-	<10	<10	<3	<3	<3	<30
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<1	<1	<1	-	<1	<2	<1	<1	<1	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<1	<1	<1	-	<1	<2	<1	<1	<1	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	-	<1	<2	<1	<1	<1	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	-	<2	<4	<2	<2	<2	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<1	<1	<1	<2	<1	<2	<1	<1	<1	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<1	<1	<1	<2	<1	<2	<1	<1	<1	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<1	<1	<1	-	<1	<2	<1	<1	<1	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<2	-	<2	<4	<2	<2	<2	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<3	-	<10	<6	<10	-	<3	<3	<3	<30
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<6	<20	<20	<12	<20	<20	<6	<6	<6	<60
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	<2	12	<2	<4	3	<2	<2	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<4	<2	<4	3	<2	<2	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<4	<2	<4	4	<2	<2	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	2	<2	<2	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	2	<2	<2	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	<2	139	<2	<4	32	<2	<2	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	<2	112	<2	<4	29	<2	<2	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	<2	324	<2	<4	34	<2	<2	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	<2	218	<2	<4	23	<2	<2	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	<2	231	<2	<4	25	<2	<2	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<2	17	<2	<4	2	<2	<2	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<2	<4	<2	<4	31	<2	<2	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<2	<4	<2	<4	19	<2	<2	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<2	<4	<2	<4	17	<2	<2	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<1	<1	<1	-	<1	<2	<1	<1	<1	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4-Dimethylphenol	2,4,5-Trichlorophenol	2-Nitrophenol	3/4-Methylphenol (m/p-cresol)	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	2-Chlorophenol	2-Methylphenol	2,4-Dinitrophenol
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	2	1	2	1	1	1	30
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							10	320	490		45
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<2	-	<2	<4	<2	-	<2	<2	<2	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<2	-	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<2	-	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<2	-	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2	<2	<2	<4	<2	<4	<2	<2	<2	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	<5	<6	<10	-	<3	<3	<3	<0.01
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<3	-	<10	<6	<10	-	<3	<3	<3	<30
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<3	-	<10	<6	<10	-	<3	<3	<3	<0.01
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<0.5	-	<1	<1	<1	-	<0.5	<0.5	<0.5	<5
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.05	<0.1	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<0.05	<0.5
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<3	<10	<10	<6	<10	<10	<3	<3	<3	<30
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.05	<0.1	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<0.05	<0.5

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date															
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<30	-	<60	-	-	-	<10	<0.2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<30	-	<30	-	-	-	<10	<0.2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<30	-	<30	-	-	<6	-	<2
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<30	-	<30	-	-	-	<10	<0.2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	<0.1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<30	-	<30	-	-	-	<6	-	-	<0.01
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	<4	-	-	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	<0.5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<30	-	<30	-	-	-	<6	-	-	<0.1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<0.001
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	<0.01
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	<2	-	-	<0.5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<2	-	-	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	<2	-	-	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<30	-	<30	-	-	-	<6	-	<10	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	<2	-	-	<0.5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	-	<4	-	-	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	<0.1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	<0.1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	<0.1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	<0.01
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	<0.01
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<30	-	<30	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<60	-	<60	-	-	-	-	-	<10	<10
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<30	-	<30	-	-	-	-	-	<10	<0.2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<30	-	<30	-	-	-	<6	-	<10	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<2	-	-	<0.5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Dinoseb	Phenols (Total Non Halogenated)	Tetrachlorophenols	3-&4-methylphenol	Phenols (Total Halogenated)	2,3,4,6-Tetrachlorophenol	4,4-DDE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	30		30				2		10	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										20	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	<0.01
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	<0.1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	<0.01
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	<0.2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	0.15
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<30	-	<30	-	-	-	-	-	<10	<0.2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<5	<100	<1	<100	<100	<30	-	<10	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<30	<100	<30	<100	<100	<30	-	<10	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<30	<100	<30	<100	<100	<30	-	<10	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<5	<100	<5	<100	<100	<1	-	<2	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<30	<100	<30	<100	<100	<30	-	<10	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.5	<10	<0.5	<10	<10	<0.5	-	<1	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<30	<100	<30	<100	<100	<30	-	<10	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.5	<10	<0.5	<10	<10	<0.5	-	<1	-	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<5	<5	-	<5	<5	<5	<5	<5	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	<0.01	<0.01	-	0.01	-	<0.01	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<0.1	-	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<0.01	<0.01	<0.01	<0.01	-	0.01	-	<0.01	<0.01	<0.01
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	<0.2	<0.2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	-	-	<0.2	<0.2
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	<0.2	<0.2
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	<0.2	<0.2
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<10	<10	-	<10	<10	<10	<10	<10	<10	<10
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2								0.01			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	<0.01	<0.01	<0.01
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<0.01	<0.01	<0.01	0.22	0.06	0.01	<0.01	<0.01	<0.01	0.23
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<4	<2	<2	<2	<4	<2	<2	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

	OCP																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<5	<5	<5	<5	<5	<5	<5	<5	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<2	<0.1	<0.2
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	<0.01
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	-	<2	<2	<4	-	-	-	<4
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<0.1	0.1	0.4	<0.1	<0.1	<0.1	-	<2	<0.1	<0.2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	<0.01
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<5	<5	<5	<5	<5	<5	-	<5	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	-	<2	<2	<4	-	-	-	<4
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<2	<0.2	<0.2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<2	<0.1	<0.2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<2	<0.1	<0.2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<2	<0.1	<0.2
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<0.01	-	<0.01	-	<0.01	-	<0.01	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.2	-	<0.2	-	-	-	-	-	<0.2	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	<0.2	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	<0.2	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	<0.2	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.5	-	<0.5	-	-	-	<2	-	<0.5	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<10	<10	<5	<10	<10	<10	<10	-	<10	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	<5	<5	<5	<5	<5	-	<5	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Hexachlorobenzene	Methoxychlor	chlordane	Endrin ketone	DDT+DDE+DDD
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.02		0.2	0.09	0.1		0.08		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<2	<0.1	<0.2
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	0.16	<0.01	<0.01	<0.01	<0.01	<0.01	0.15	0.06	0.21	0.37
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	<2	<4	-	-	-	<4
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.5	-	<0.5	-	-	-	-	-	<0.5	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.01	-	<0.01	-	-	-	-	-	<0.01	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.01	-	<0.01	-	-	-	-	-	<0.01	<0.01
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<0.2	<5	-	-	-	<2	<2	<2	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<0.2	<5	-	-	-	<2	<2	<2	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<5	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	-	-	-	-	<1	<1	<1	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.01	<0.1	-	-	<0.01	<1	<1	<1	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<0.2	<5	-	-	-	<2	<2	<2	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.1	<1	-	-	<0.2	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.01	<0.1	-	-	<0.01	<1	<1	<1	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<0.01	-	-	-	-	<1	<1	<1	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<0.1	<1	-	-	-	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.001	-	<0.001	<0.001	-	-	<0.02	-	<0.2	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<0.01	-	-	-	-	<1	<1	<1	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<0.01	-	-	-	-	<1	<1	<1	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<0.2	<1	-	-	-	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<0.1	<1	-	-	-	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<0.01	-	-	-	-	<1	<1	<1	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<0.2	<200	<0.2	<0.2	-	-	<0.2	-	<0.2	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<0.1	<1	-	-	-	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<0.1	<1	-	-	-	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<0.01	<0.1	-	-	<0.01	<1	<1	<1	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<0.01	-	-	-	-	<1	<1	<1	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.2	-	-	-	-	<2	-	<2	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.2	-	-	-	-	<2	-	<2	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<0.2	-	-	-	-	<2	-	<2	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<10	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<0.2	<5	-	-	-	<2	<2	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Heptachlor epoxide	Toxaphene	Chlordane (cis)	Chlordane (trans)	p,p-DDT	Toxkuthion	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.2	5	0.5	0.5		2	0.5	2	0.5	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.2					0.02			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<0.01	<0.1	-	-	<0.01	<1	<1	<1	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.1	<1	-	-	<0.2	<2	<2	<2	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<0.01	<0.1	-	-	<0.01	<1	<1	<1	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.2	<1	-	-	<0.2	<2	<2	<2	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<0.01	<0.1	-	-	0.37	<1	<1	<1	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.5	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.5	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<0.2	<5	-	-	-	<2	<2	<2	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.01	-	<0.1	-	-	<0.1	<0.1	<0.1	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.01	-	<0.1	-	-	<0.5	<0.5	<0.5	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<0.01	-	-	-	<1	<1	<1	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<20	<2	<20	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<20	<2	<20	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<10	<10	<1	<1	<10	<1	<1	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<10	<10	<1	<1	<10	<1	<1	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<20	<2	<20	<2	<2	<2	<2	<2	<2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	-	<2	-	-	<2	<2	-	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	<0.2	-	-	<0.01	<0.2	-	<0.15
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	-	<2	-	-	<2	<2	-	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	<0.2	-	<0.2	-	-	<0.2	<0.2	-	<0.2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<20	-	<20	<2	<2	<2	-	<2	<2	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<20	-	<20	<2	<2	<2	-	<2	<2	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<20	-	<20	<2	<2	<2	-	<2	<2	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Counaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chlorfenvinphos	Chlorpyrifos	Coumaphos	Chlorpyrifos-methyl	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Disulfoton	Dimethoate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.5	0.5	20	0.5	2	2	0.5	0.5	2	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			0.01					0.01			0.15
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<2	<20	<20	<2	<2	<20	<2	<2	<2	<2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	<2	-	-	<2	<2	-	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.5	-	-	<0.5	-	-	-	<0.5	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	<0.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<20	<2	<20	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<10	<10	<1	<1	<10	<1	<1	<1	<1

	Organophosphorous Pesticides																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<2	<2	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<2	<2	<2	<2	<2	<2	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<2	<2	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	<2	-	<2	-	-	<2	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<2	<2	<2	<2	<2	<2	<2	-	<2	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	<0.2	<0.2	-	-	-	<0.05	<0.2	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	<2	-	<2	-	-	<2	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	<2	-	<2	-	-	<2	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<2	<2	<2	<2	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	<0.2	<0.2	-	-	-	-	<0.2	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<2	<2	<2	<2	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<2	<2	<2	<2	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<2	<2	<2	-	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	<0.5	<0.1	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<2	<2	<2	-	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<2	<2	<2	-	<2	<2	<2	-	<2	<2
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Ethoprop	Fensulfothion	Ethion	Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	0.5	2	0.5	2	2	0.5	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					0.2				0.05		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	<0.5	<0.5	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	-	<2	-	-	<2	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	<0.5	-	<0.5	-	-	-	<2	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	<0.5	-	<0.5	-	-	<0.5	<2.0	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	<0.1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date															
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<2	<2	<20	<2	<2	-	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<2	<2	<20	<2	<2	-	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	-	<1	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	-	<1	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<2	<2	<20	<2	<2	-	<2	<2
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2.0	-	-	-	-	<0.5	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	<2	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2.0	-	-	-	-	<0.5	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	<0.2	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	<2	-	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	<0.2	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<2	<2	<20	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<2	<2	<20	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<2	<2	<20	<2	<2	-	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<2	<2	<20	<2	<2	-	<2	<2	<2	<2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	20	2	2	0.5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<2	<2	<2	<2	<2	-	<2	<2	<2	<2
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<2	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<2	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	<2	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<2	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<2	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2.0	-	-	-	-	<0.5	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<2	<2	<20	<2	<2	-	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

								Amino Aliphatics				Amino Aromatics					
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	647,000	<1,000
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2	<2	<2	<2	<2	-	-	<4	57,000	<1,000
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	141,000	<1,000
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	135,000	<1,000
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	<5	<5	-	<500	<500	<5	-	230,000	<20,000
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	82,000	<1,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	548,000	<1,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	542,000	<1,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	113,000	<1,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	95,000	<1,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	60,000	<1,000
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	65,000	<1,000
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	<5	<5	-	<10	<10	<5	-	80,000	<20,000
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	70,000	<1,000
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	713,000	<1,000
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	720,000	<1,000
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	701,000	<1,000
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	687,000	<1,000
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	87,000	<1,000
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	180,000	<1,000
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	276,000	<1,000
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	210,000	<1,000
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	<5	<5	-	<5	<5	<5	-	650,000	<20
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	375,000	<1,000
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	428,000	<1,000
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	<5	<5	-	<5	<5	<5	-	370,000	<20,000
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	661,000	<1,000
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	254,000	<1,000
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	232,000	<1,000
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	264,000	<1,000
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	286,000	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	231,000	<1,000
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	252,000	<1,000
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	1,250,000	<1,000
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	862,000	<1,000
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	1,260,000	<1,000
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	926,000	<1,000
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	537,000	<1,000
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	72,000	<1,000
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2	<2	<2	<2	<2	-	-	<4	24,000	<1,000
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2	<2	<2	<2	<2	-	-	<4	124,000	<1,000
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2	<2	<2	<2	<2	-	-	<4	103,000	<1,000
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	1,050,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	1,310,000	<1,000
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	1,130,000	<1,000
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	1,120,000	<1,000
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	769,000	<1,000
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	1,080,000	<1,000
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	1,120,000	<1,000
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	1,150,000	<1,000
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	658,000	<1,000
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	774,000	<1,000
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	159,000	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	73,000	<1,000
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	980,000	<20,000
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<5	<5	-	<5	<5	<5	-	120,000	<20,000
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	<2	<2	<2	-	-	<4	235,000	<1,000
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	215,000	<1,000
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	6,000	<1,000
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2	<2	<2	<2	<2	-	-	<4	28,000	<1,000
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<2	<2	-	<2	<2	<2	-	240,000	<20,000
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	310,000	<5,000
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	300,000	<20,000
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	330,000	<20,000
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	74,000	<1,000
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	80,000	<1,000
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	80,000	<1,000
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	83,000	<1,000
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	74,000	<1,000
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	101,000	<1,000
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	98,000	<1,000
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	101,000	<1,000
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	-	-	<4	2,490,000	<1,000
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,290,000
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	432,000	<1,000
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	460,000	<1,000
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	474,000	<1,000
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	486,000	<1,000
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	1,240,000	<1,000
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	1,150,000	<1,000
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	1,170,000	<1,000
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	1,240,000	<1,000
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	302,000	<1,000
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	279,000	<1,000
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	246,000	<1,000
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	659,000	<1,000
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	658,000	<1,000
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	678,000	<1,000
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	593,000	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	130,000	<1,000
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	122,000	<1,000
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	502,000	<1,000
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	443,000	<1,000
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	448,000	<1,000
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	450,000	<1,000
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	440,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	520,000	<1,000
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	541,000	<1,000
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	558,000	<1,000
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	585,000	<1,000
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	791,000	<1,000
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	270,000	<1,000
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	339,000	<1,000
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	197,000	<1,000
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	1,250,000	1,150,000
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,540,000	1,390,000
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	437,000	376,000
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	128,000	77,000
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	306,000	<1,000
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	320,000	<1,000
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	303,000	<1,000
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	789,000	<1,000
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	872,000	<1,000
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	822,000	<1,000
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	830,000	<1,000
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	962,000	<1,000
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<2	<2	<2	-	-	<4	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	990,000	<20
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	1,000,000	<20
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	48,000	<1,000
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	42,000	<1,000
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	339,000	<1,000
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	1,000	<1,000
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	2,000	<1,000
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2	<2	<2	<2	<2	-	-	<4	7,000	<1,000
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	36,000	<20,000
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	4,000	<1,000
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	8,000	<1,000
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<2	<2	-	-	<4	56,000	<1,000
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2	<2	<2	<2	<2	-	-	<4	32,000	<1,000
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2	<2	<2	<2	<2	-	-	<4	20,000	<1,000
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	352,000	<1,000
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	384,000	<1,000
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	480,000	<1,000
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<2	<2	-	-	<4	395,000	<1,000
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	800,000	<1,000
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	838,000	<1,000
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	414,000	<1,000
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	<5	<5	-	<5	<5	<5	-	84,000	<20,000
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	53,000	<1,000
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	56,000	<1,000
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	607,000	<1,000
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	607,000	<1,000
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	494,000	<1,000
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	565,000	<1,000
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	92,000	<1,000
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	88,000	<1,000
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<2	<2	<2	-	-	<4	678,000	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	649,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	816,000	<1,000
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	746,000	<1,000
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	734,000	<1,000
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	754,000	<1,000
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	147,000	<1,000
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	65,000	<1,000
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	132,000	<1,000
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	59,000	<1,000
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	7,000	<1,000
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	5,000	<1,000
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	6,000	<1,000
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	3,000	<1,000
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	9,000	<1,000
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	390,000	<20,000
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	<20,000	<20,000
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	120,000	<20,000
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	19,000	<5,000
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	22,000	<20,000
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	<20,000	<20,000
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	42,000	<1,000
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	36,000	<1,000
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	61,000	<20
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	61,000	<20,000
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	485,000	<1,000
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	15,000	<1,000
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	475,000	<1,000
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<5	<5	-	<5	<5	<5	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	116,000	<1,000
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	144,000	<1,000
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	56,000	<1,000
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	10,000	<1,000
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	91,000	<1,000
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	12,000	<1,000
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	12,000	<1,000
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	357,000	<1,000
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	1,520,000	1,470,000
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	51,000	<1,000
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	51,000	<1,000
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	2,000	<1,000
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	10,000	<1,000
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	2,000	<1,000
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	74,000	<1,000
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	83,000	<1,000
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	9,000	<1,000
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	443,000	<1,000
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	366,000	<1,000
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	274,000	<1,000
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	<10	<10	-	<10	<10	<10	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	290,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO ₃)	Alkalinity (Hydroxide) as CaCO ₃
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	289,000	<1,000
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	280,000	<1,000
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	282,000	<1,000
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	252,000	<1,000
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	258,000	<1,000
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<2	<2	-	-	<4	53,000	<1,000
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	56,000	<1,000
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	144,000	<1,000
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	49,000	<1,000
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	26,000	<1,000
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	55,000	<1,000
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	3,000	<1,000
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	47,000	<1,000
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	51,000	<1,000
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	92,000	<1,000
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	92,000	<1,000
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	89,000	<1,000
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	90,000	<1,000
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	96,000	<20,000
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	52,000	<1,000
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	71,000	<1,000
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	22,000	<1,000
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	24,000	<1,000
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	96,000	<1,000
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	102,000	<1,000
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	105,000	<1,000
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<2	<2	-	-	<4	98,000	<1,000
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<2	<2	-	-	<4	44,000	<1,000
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	2,000	<1,000
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	<1,000	<1,000
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	4,000	<1,000
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	<5	<5	-	<50	<50	<5	-	<20,000	<20,000
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	8,000	<1,000
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1,000	<1,000
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<1,000	<1,000
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	475,000	<1,000
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	486,000	<1,000
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	561,000	<1,000
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	333,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO ₃)	Alkalinity (Hydroxide) as CaCO ₃
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	322,000	<1,000
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	258,000	<1,000
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	183,000	<1,000
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	171,000	<1,000
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	304,000	<1,000
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	174,000	<1,000
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	191,000	<1,000
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	187,000	<1,000
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	249,000	<1,000
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	257,000	<1,000
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	264,000	<1,000
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	238,000	<1,000
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	147,000	<1,000
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	6,000	<1,000
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	11,000	<1,000
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	149,000	<1,000
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	15,000	<1,000
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	29,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	35,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	44,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	66,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	8,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	40,000	<1,000
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	69,000	<1,000
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	12,000	<1,000
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	39,000	<1,000
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	66,000	<1,000
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	229,000	<1,000
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	221,000	<1,000
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	190,000	<1,000
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	213,000	<1,000
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	165,000	<1,000
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	203,000	<1,000
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	88,000	<1,000
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	103,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	85,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	92,000	<1,000
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	67,000	<1,000
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	211,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	83,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	75,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	96,000	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	<2	<2	<2	-	-	<4	187,000	<1,000
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	721,000	<1,000
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	703,000	<1,000
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	953,000	<1,000
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	805,000	<1,000
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	838,000	<1,000
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	729,000	<1,000
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	879,000	<1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	358,000	<1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	542,000	<1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	590,000	<1,000
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	590,000	<1,000
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	512,000	<1,000
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	605,000	<1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	575,000	<1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	495,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	575,000	<1,000
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	102,000	<1,000
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2	<2	<2	<2	<2	-	-	<4	141,000	<1,000
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	114,000	<1,000
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	314,000	<1,000
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	<5	<5	-	<10	<10	<5	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	239,000	<1,000
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<2	<2	-	-	<4	395,000	<1,000
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	472,000	<1,000
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	491,000	<1,000
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	4,000	<1,000
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	582,000	<1,000
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	349,000	<1,000
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2	<2	<2	<2	<2	-	-	<4	304,000	<1,000
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2	<2	<2	<2	<2	-	-	<4	6,000	<1,000
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	285,000	<1,000
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	301,000	<1,000
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2	<2	<2	<2	<2	-	-	<4	597,000	<1,000
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2	<2	<2	<2	<2	-	-	<4	238,000	<1,000
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	15,000	<1,000
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	80,000	<1,000
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	408,000	<1,000
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	547,000	<1,000
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	314,000	<1,000
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	223,000	<1,000
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	534,000	<1,000
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	60,000	<1,000
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	223,000	<1,000
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	274,000	<1,000
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	173,000	<1,000
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	155,000	<1,000
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	88,000	<1,000
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	105,000	<1,000
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	99,000	<1,000
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	107,000	<1,000
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	715,000	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	681,000	<1,000
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	702,000	<1,000
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	620,000	<1,000
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	580,000	<1,000
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	498,000	<1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	5	5	4	1,000	1,000
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	103,000	<1,000
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	123,000	<1,000
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	144,000	<1,000
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	510,000	<20,000
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	430,000	<20,000
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	195,000	<1,000
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2	<2	<2	<2	<2	-	-	<4	334,000	<1,000
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	16,000	<1,000
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	-	<4	<1,000	<1,000
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	5,000	<1,000
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	4,000	<1,000
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	255,000	<1,000
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<2	<2	<2	-	-	<4	4,000	<1,000
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<2	-	-	<4	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	310,000	<1,000
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<2	<2	<2	<2	<2	-	-	<4	289,000	<1,000
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	-	-	<4	54,000	<1,000
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	53,000	<1,000
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	<5	<5	-	<5	<5	<5	-	5,100,000	<20,000
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	28,000	<1,000
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	10,000	<1,000
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	18,000	<1,000
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

	Alkalinity										Anilines					
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness as CaCO3	Hardness as CaCO3 (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2										250
AS2159 – 2009 Piling – Design and Installation																
PFAS NEMP 2020 Freshwater 99%																
WSA SBT - EPL 21672 (amended 10 May 2023)							1									

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	647,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	57,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	141,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	135,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	230,000	<10,000	-	-	<5	-	-	-	<10
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	82,000	<1,000	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	548,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	542,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	113,000	<1,000	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	68,000	27,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	60,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	65,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	80,000	<10,000	-	-	<5	-	-	-	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	70,000	<1,000	-	-	<4	<4	<2	<2	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	713,000	<1,000	2,120,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	720,000	<1,000	2,400,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	701,000	<1,000	2,510,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	687,000	<1,000	2,500,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	81,000	6,000	104,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	180,000	<1,000	80,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	276,000	<1,000	155,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	210,000	<1,000	282,000	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	650,000	<10	2,500,000	-	<5	-	-	-	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	375,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	428,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	330,000	37,000	-	-	<5	-	-	-	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	661,000	<1,000	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	254,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	232,000	<1,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	264,000	<1,000	4,720,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	286,000	-	3,590,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	231,000	<1,000	4,310,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	252,000	<1,000	4,760,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	1,250,000	<1,000	3,840,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	862,000	<1,000	3,610,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	1,260,000	<1,000	3,930,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	926,000	<1,000	5,010,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	537,000	<1,000	3,440,000	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	72,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	24,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	124,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	103,000	<1,000	-	-	<4	<4	<2	<2	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	1,050,000	<1,000	-	-	<4	<4	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	1,310,000	<1,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	1,130,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	1,120,000	<1,000	4,860,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	769,000	<1,000	2,690,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	1,080,000	<1,000	4,550,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	1,120,000	<1,000	4,390,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	1,150,000	<1,000	4,400,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	658,000	<1,000	3,350,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	774,000	<1,000	3,820,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	159,000	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	73,000	<1,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	980,000	<10,000	3,600,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	980,000	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	120,000	<10,000	-	-	<5	-	-	-	-	<5
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	235,000	<1,000	6,090,000	-	<4	<4	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	215,000	<1,000	5,760,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	6,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	28,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	240,000	<10,000	-	-	<4	-	-	-	-	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	310,000	<5,000	500,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	300,000	<10,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	330,000	<10,000	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	74,000	<1,000	364,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	80,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	80,000	<1,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	83,000	<1,000	365,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	74,000	<1,000	364,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	101,000	<1,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	98,000	<1,000	393,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	101,000	<1,000	354,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<1,000	198,000	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	198,000	2,290,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	432,000	<1,000	4,020,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	460,000	<1,000	3,810,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	474,000	<1,000	3,740,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	486,000	<1,000	3,520,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	1,240,000	<1,000	1,420,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	1,150,000	<1,000	1,310,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	1,170,000	<1,000	1,390,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	1,240,000	<1,000	1,480,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	302,000	<1,000	196,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	279,000	<1,000	191,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	246,000	<1,000	143,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	659,000	<1,000	2,880,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	658,000	<1,000	2,660,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	678,000	<1,000	2,240,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	593,000	-	2,790,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	130,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	122,000	<1,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	502,000	<1,000	962,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	443,000	<1,000	932,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	448,000	<1,000	870,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	450,000	<1,000	904,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	440,000	<1,000	1,120,000	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	520,000	<1,000	3,830,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	541,000	<1,000	3,670,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	558,000	<1,000	3,700,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	585,000	<1,000	4,170,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	791,000	<1,000	5,710,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	270,000	<1,000	1,730,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	339,000	<1,000	1,480,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	197,000	<1,000	727,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	<1,000	101,000	1,680,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	<1,000	149,000	2,270,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	<1,000	62,000	1,600,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	<1,000	51,000	3,750,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	306,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	320,000	<1,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	303,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	789,000	<1,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	872,000	<1,000	2,820,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	822,000	<1,000	2,820,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	830,000	<1,000	2,650,000	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	962,000	<1,000	3,160,000	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	990,000	<10	9,100,000	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	1,000,000	<10	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	48,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	42,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	339,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	1,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	2,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	7,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	36,000	<10,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	4,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	8,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	56,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	32,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	20,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	352,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	384,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	480,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	11,000	384,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	549,000	250,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	838,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	414,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	84,000	<10,000	-	-	<5	-	-	-	-	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	53,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	56,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	607,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	607,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	494,000	<1,000	3,650,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	565,000	<1,000	3,640,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	92,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	88,000	<1,000	464,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	678,000	-	3,880,000	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	649,000	<1,000	3,950,000	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	816,000	<1,000	4,020,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	746,000	<1,000	3,600,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	734,000	<1,000	3,720,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	754,000	<1,000	3,990,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	147,000	<1,000	5,510,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	65,000	<1,000	5,470,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	132,000	<1,000	5,020,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	59,000	<1,000	4,540,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	7,000	<1,000	4,930,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	5,000	<1,000	4,450,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	6,000	<1,000	4,640,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	3,000	<1,000	4,300,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	9,000	<1,000	5,110,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	390,000	<10,000	5,000,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<20,000	<10,000	4,100,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	120,000	<10,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	19,000	<5,000	6,300,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	22,000	<10,000	5,000,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<20,000	<10,000	5,200,000	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	42,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	36,000	<1,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	61,000	<10	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	61,000	<10,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	485,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	15,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	475,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	<5	-	-	-	-	<5
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	116,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	144,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	56,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<1,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	10,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	91,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	12,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	12,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	357,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<1,000	-	-	-	<4	<4	<2	<2	<2	<2
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	51,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	51,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	2,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	10,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	2,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	74,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	83,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	9,000	<1,000	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	443,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	366,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	274,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	<10	-	-	-	-	<10
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	290,000	<1,000	-	-	<4	<4	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	289,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	280,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	282,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	252,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	258,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	53,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	56,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	144,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	49,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	26,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	55,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	3,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	47,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	51,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	92,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	92,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	89,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	90,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	96,000	<10,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	52,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	71,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	22,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	24,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	96,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	102,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	105,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	98,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	44,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	2,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<1,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	4,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<20,000	<10,000	-	-	<5	-	-	-	-	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	8,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<1,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<1,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	475,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	486,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	561,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	333,000	<1,000	-	-	<4	<4	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	322,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	258,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	183,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	171,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	304,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	174,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	191,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	187,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	249,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	257,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	264,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	238,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	147,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	6,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	11,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	94,000	55,000	-	-	<4	<4	<2	<2	<2	2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	15,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	29,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	35,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	44,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	66,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	8,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	40,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	69,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	12,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	39,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	66,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	229,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	221,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	190,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	213,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	165,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	203,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	88,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	103,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	85,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	92,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	67,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	211,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	83,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	75,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	96,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	187,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	721,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	703,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	953,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	805,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	838,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	729,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	879,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	358,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	542,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	590,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	590,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	512,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	605,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	575,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	495,000	<1,000	-	-	<4	<4	<2	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	575,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	102,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	141,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	114,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	314,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	<5	-	-	-	-	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	239,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	395,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	472,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	491,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	4,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	582,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	349,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	304,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	6,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	285,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	301,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	597,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	238,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	11,000	4,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	67,000	13,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	408,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	547,000	<1,000	5,850,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	314,000	<1,000	5,180,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	223,000	<1,000	1,304,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	534,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	60,000	<1,000	1,510,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	223,000	<1,000	1,340,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	274,000	<1,000	1,310,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	173,000	<1,000	1,380,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	155,000	<1,000	1,370,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	88,000	<1,000	1,440,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	105,000	<1,000	1,310,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	99,000	<1,000	1,220,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	107,000	<1,000	1,220,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	715,000	-	3,580,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	681,000	<1,000	3,600,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	702,000	<1,000	3,470,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	620,000	<1,000	2,900,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	580,000	<1,000	2,560,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	498,000	<1,000	2,120,000	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bicarbonate Alkalinity as CaCO ₃	Carbonate Alkalinity as CaCO ₃	Hardness as CaCO ₃	Hardness as CaCO ₃ (filtered)	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1,000	1,000			4	4	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											250
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	103,000	<1,000	40,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	123,000	<1,000	535,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	138,000	6,000	187,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	510,000	<10,000	4,600,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	430,000	<10,000	3,700,000	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	195,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	334,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	16,000	-	-	4,180,000	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<1,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	5,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	4,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	201,000	-	-	58,000	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	4,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	310,000	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	289,000	-	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	54,000	<1,000	-	-	<4	<4	<2	<2	<2	<2
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	53,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	5,100,000	<10,000	-	-	<5	-	-	-	-	<5
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	28,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	10,000	<1,000	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	18,000	<1,000	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

								Biological		Carbamates	Dioxins		Field				
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL	500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	34,383	-	2,020	160.3	23.4
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	31,542	-	1,980	152.8	24.1
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	34,032	-	1,820	249.6	22.2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	34,032	-	1,820	249.6	22.2
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	11,654.00	-	1,090	-75.4	24.4
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	11,238	-	1,480	-60.4	25.6
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	26,638	-	3,560	-20.1	19.8
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	24,475	-	750	92.8	22.1
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	4,076	-	0	-28.3	23.4
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	2,338	-	3,620	103.5	21.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	2,338	-	3,620	103.5	21.5
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	2,893	-	2,300	-43.2	18.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	2,384	-	3,070	140.6	16.8
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	115,000	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	115,000	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	115,000	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	6,000	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	325	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	1,400	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	330	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	110	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	3,015	-	2,800	149.8	19.6
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	7,685	-	0	-27.3	23.2
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	21,129	-	3,400	166.9	19.8
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	18,021	-	5,650	-35.2	20.9
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	6,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	27,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	115,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	115,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	115,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	500,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	500,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	115,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	27,000	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	1,475	-	1,610	-128.5	23.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	27,774	-	1,640	-49.6	22.6

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	24,304	-	160	-219.4	18.8
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	2,493	-	3,820	-15.5	25.6
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	115,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	115,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	500,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	27,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	27,000	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	325	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	23,034	-	2,350	206.7	23
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	2,430	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	1,400	-	-	-	-	2,420	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	115,000	-	-	-	-	2,430	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	3,450	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	6,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	500,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	500,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	6,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	1,716	-	2,760	94.2	18.5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	621	-	930	-35.8	23.1
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	6,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	6,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	1	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	1,317	-	180	-59.9	20.3
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	1,327	-	2,490	96.9	20.8
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	1,853	-	1,120	102.8	22.9
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	115,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	3,300	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	11,932	-	2,200	141.8	20.7
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	10,668	-	2,240	203.3	30.5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	12,703	-	1,710	-43.8	24.4
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	12,006	-	3,130	162.3	18.3
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	12,263	-	2,580	146.7	26.4
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	9,193	-	4,790	176.76	24.6
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	9,444	-	5,760	141.2	19.7
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	20,511	-	1,610	185.4	21.9
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	37,141	-	7,830	191.5	21.7
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	10,729	-	880	149.3	21.2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	11,708	-	660	-53.9	25.7
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	16,185	-	740	-36.9	21.4
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	26,887	-	570	-293.5	19.3
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	27,202	-	790	-35	20
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	32,100	-	510	-287.6	20.3
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	32,054	-	880	43.9	21.1
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	20,101	-	3,040	-50.2	18.5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	6,000	-	-	-	-	23,000	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	23,800	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	1,580	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	115,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	500,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	115,000	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	27,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	115,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	27,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	27,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	6,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	6,000	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	50	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	1	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	21,290	-	4,240	122.7	19.4
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	23,655	-	1,090	-10.6	27
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	9.3	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	1,093	-	1,410	35.9	19.3

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	1,702	-	1,030	43.5	20.4
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	1,274	-	2,340	5.2	24.5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	1,279	-	2,460	5	24.5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	1,274	-	2,620	5	24.4
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	3,740	-	2,040	102.4	27.5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	2,302	-	3,840	110.7	25.4
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	3,935	-	410	85.5	27.6
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	2,216.50	-	2,550	255.2	21.4
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	3,414	-	2,160	301.2	21.2
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	2,008.50	-	2,060	210.9	21.7
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	3,821	-	1,540	87.7	21
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	2,437.50	-	2,110	149.8	24.2
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	1,458	-	2,380	-68.7	24.2
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	701	-	540	-72.6	20.8
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	1,002	-	2,090	144.7	20.7
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	201.4	-	2,750	33.4	21.2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	4,941	-	890	-64.3	16.7
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,212	-	2,780	132	18.8
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,149	-	3,200	-77	17.7
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	13,759	-	690	89.5	17.3
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,063	-	3,340	-34.9	16.8
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	15,758	-	970	250.9	18.6
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	3,008	-	1,970	-41.5	11.1
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	24,238	-	2,150	126.7	19.5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	25,716	-	2,500	-87.7	17.1
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	20,495	-	1,230	199.5	16.3
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	23,850	-	1,840	-45.5	19.2
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,745	-	2,360	160.9	17.8
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	30,508	-	1,110	134.2	20.4
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	4,611	-	13,710	110.3	21.2
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	33,045	-	1,160	-42.5	22.4
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	9,975	-	4,330	181.3	21.2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	9,214	-	3,210	189.6	22
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	9,460	-	2,220	-35.6	23.7
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	17,720	-	2,440	116	25.1
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	17,257	-	6,420	259.9	22.3
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	1,608	-	2,190	-126.5	23.9
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	13,574	-	1,750	49.1	21.6

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	16,051	-	810	-95.4	21.6
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	13,245	-	900	5	20.2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	20,710	-	1,970	-90.5	20
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	11,929	-	2,210	46.2	16.4
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	24,279	-	2,730	-195	17.2
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	17,317	-	3,830	-189.5	18.1
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	25,928	-	2,110	-177.2	18.1
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,825	-	1,390	44.8	18.4
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,644	-	1,480	49.5	18.5
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	14,226	-	3,270	36.7	17.3
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	23,081	-	1,470	-78	19
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	20,975	-	930	-80	19.1
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	16,579	-	3,760	-87	17.3
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	15,694	-	4,240	297.4	17.9
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	20,482	-	2,940	198.6	19.4
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	20,539	-	4,680	138	19.1
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,152	-	3,160	22.4	19.4
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,539	-	2,220	112.9	19.3
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	14,338	-	3,180	-26.1	19.6
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	16,069	-	1,270	41.2	23
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	20,336	-	2,800	33.8	22.4
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	21,660	-	880	12.9	21.9
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,034	-	1,320	45.3	17.8
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,944	-	1,550	-167.3	22.9
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	24,508	-	1,700	-165.5	23.3
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,909	-	2,650	-164.9	20
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,150	-	1,680	72.3	17.3
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,325	-	1,110	73.3	18
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,767	-	1,280	71.4	18.4
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	23,196	-	1,440	-62.5	20
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,496	-	1,930	-62.4	19.2
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	23,817	-	1,790	-64.4	19.6
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,967	-	7,700	192.9	20
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,126	-	3,440	128.5	20.3
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,193	-	3,340	97.8	20.2
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	6,899	-	3,490	20.2	19.4
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,500	-	3,430	12.9	19.4
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,927	-	3,460	17.5	19.3
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	14,259	-	1,320	56.7	25.3
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	18,344	-	2,250	39.5	24.2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	20,743	-	920	61.2	23.8
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	17,466	-	2,470	67.4	18.4
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	23,208	-	2,400	108.7	22
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	31,732	-	1,670	-155.8	25.8
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	33,656	-	3,960	-134.2	25.4

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,258	-	1,300	70.4	17.7
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	26,989	-	1,210	74.9	20
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	27,531	-	930	78.2	19.7
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	30,502	-	1,600	-64.1	20.4
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	26,895	-	1,960	-65.9	20.5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	22,870	-	2,250	-73	19.8
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	24,463	-	3,550	93.6	20.9
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,043	-	3,250	140.5	20.6
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	25,041	-	3,180	94.7	20.6
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	26,762	-	1,030	15.4	19.6
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	19,877	-	2,320	38.8	19.5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	10,400	-	2,450	-54.5	22.7
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	10,400	-	2,450	-54.5	22.7
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	10,400	-	2,450	-54.5	22.7
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	292.3	-	4,720	235.1	22.2
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	292.3	-	4,720	235.1	22.2
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	292.3	-	4,720	235.1	22.2
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	22,576	-	4,300	90.4	20.6
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	22,576	-	4,300	90.4	20.6
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	22,576	-	4,300	90.4	20.6
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	25,335	-	1,980	172.7	20
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	25,335	-	1,980	172.7	20
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	10,204	-	3,850	144.6	25.8
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	10,204	-	3,850	144.6	25.8
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	28,031	-	1,760	-77.6	20.6
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	22,411	-	1,700	-147.7	19.6
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	30,293	-	1,760	-77.6	20.5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	20,915	-	1,390	-116.1	22.3
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	20,903	-	1,090	-115.9	22.2

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	20,903	-	1,090	-115.9	22.2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	2,170	-	350	-392.7	23.9
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	27,017	-	2,010	99.8	18.3
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	18,251	-	1,560	-89.1	23.2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	6,690	-	1,350	-85.3	19.6
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	8,854	-	7,370	116.3	19.3
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	8,514	-	2,590	-155.8	20
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,037	-	1,260	-29.9	17.4
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,879	-	1,740	-95.3	20.2
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	21,806	-	2,230	-87.4	21
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	28,724	-	890	46.9	19.4
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	30,460	-	1,530	-33.7	20.5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	25,392	-	880	-78.6	19
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	22,331	-	3,080	-18.7	18.8
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,558	-	1,400	-7	19.7
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	24,226	-	880	-156	20.3
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	18,430	-	3,040	-67	19.7
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	13,732	-	1,980	-116.2	18
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	14,622	-	1,180	-167.2	22.7
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	6,000	-	-	-	-	29,000	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	23,800	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	500,000	-	-	-	-	13,000	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	27,200	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	20	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	13,000	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	1	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	1	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	1	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	20	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	115,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	115,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	27,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	27,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	1,400	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sulphate Reducing Bacteria Population Estimate	Sulphate Reducing Bacteria Population Estimate	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Electrical Conductivity (Non Compensated)	Depth to Water	DO (Field)	Redox Potential (Field)	Temp (Field)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mL	pac/mL	µg/L	µg/L	µg/L	µS/cm	mbTOC	µg/L	mV	oC
EQL				500	500	1	1	0.1	0.1	1										
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	6,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	27,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	27,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	>110	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	>110	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	110	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	4,110	-	14,800	-71	15.5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	22,235	-	3,810	12.7	19.3
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	28,377	-	1,000	178.5	23
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	25,868	-	1,020	155.2	22.5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	500,000	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	9,038	-	2,190	145.7	20.5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	9,048	-	1,350	173.5	19.9
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	9,887	-	3,800	139.6	25.8
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	9,886	-	3,810	138.7	25
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	9,886	-	3,810	139.7	25.4
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	998	-	1,960	-	20
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	<0.01	<0.01	-	998	-	1,960	-78.4	20
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	2	3,005	-	1,290	21.3	18.4
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	6,550	-	1,640	-26	19.1
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	6,550	-	1,640	-	19.1
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	<0.01	<0.01	-	7,784.40	-	240	47.7	19.82
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	5,036	7.99	810	-34.1	19.9
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	6,288	-	430	-	19.5
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	6,288	8.264	430	-41.7	19.5
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	5,439	8.321	2,230	54.5	16.9
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	5,439	-	2,230	-	16.9
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	6,731	-	1,100	-	20.5
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	7,592	-	380	-	19.4

												EP068A: OC Pesticides	NA			
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (II+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL	500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2										
AS2159 – 2009 Piling – Design and Installation											5.5					
PFAS NEMP 2020 Freshwater 99%																
WSA SBT - EPL 21672 (amended 10 May 2023)							1				6.5-8					

Monitoring Zone	Location Code	Field ID	Date															
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	249
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	4.233	3.95	-	-	-	-	68
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	4.236	3.9	-	-	-	-	62
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	4.076	4.38	-	-	-	-	77
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	4.076	4.38	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	4.235	5.84	-	-	-	-	72
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	70
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	77
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	4.294	6.11	-	-	-	-	57
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	7.186	7.9	-	-	-	-	443
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	7.257	7.3	-	-	-	-	427
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	7.221	6.95	-	-	-	-	73
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	7.185	6.43	-	-	-	-	56
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	7.185	6.43	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	54
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	2.532	6.01	-	-	-	-	55
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	74
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	2.719	5.91	-	-	-	-	55
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	320
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	346
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	353
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	378
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	35
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	17
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	29
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	95
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	9,400,000	-	-	-	-	-	240
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	2.501	7.87	-	-	-	-	59
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	64
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	70
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	2.54	7.19	-	-	-	-	104
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	2.701	6.73	-	-	-	-	46
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	2.88	6.4	-	-	-	-	41
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	305
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	235
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	255
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	256
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	235
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	308
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	273
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	241
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	170
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	2.045	6.38	-	-	-	-	40
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	32
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	47
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	40
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	6.421	6.91	-	-	-	-	428

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO ₄ - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	5.804	6.79	-	-	-	-	420
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	4.112	7.05	-	-	-	-	436
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	312
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	180
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	303
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	297
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	296
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	252
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	291
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	41
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	26
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	13,000,000	-	-	-	-	-	-	270
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	22,000,000	-	-	-	-	-	-	420
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	96
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	95
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	3.189	4.03	-	-	-	-	34
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	34
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	400
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	6,800,000	-	-	-	-	-	-	33
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	6,400,000	-	-	-	-	-	-	32
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	6,400,000	-	-	-	-	-	-	33
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	6.18	-	-	-	-	32
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	37
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	37
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	6.62	-	-	-	-	34
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	6.18	-	-	-	-	32
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	6.45	-	-	-	-	57
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	52
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	48
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	826
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	826
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	478
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	640
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	586
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	610
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	574
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	287
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	267
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	283
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	306
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	19
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	17
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	11
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	514
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	465
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	406
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	514
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	0.896	8.11	-	-	-	-	78
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	0.875	7.26	-	-	-	-	77
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	62
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	60
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	60
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	62
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	72

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO ₄ - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	674
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	658
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	655
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	671
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	374
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	143
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	162
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	136
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	668
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	910
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	639
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	1,500
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	4.61	7.46	-	-	-	-	172
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	4.615	6.7	-	-	-	-	168
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	4.643	6.72	-	-	-	-	164
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	516
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	465
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	467
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	448
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	513
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	1.935	5.45	-	-	-	-	20
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	1.986	5.56	-	-	-	-	20
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	2.195	6.16	-	-	-	-	51
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	2.225	5	-	-	-	-	3
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	2.375	4.32	-	-	-	-	3
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	2.532	5.08	-	-	-	-	8
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	8.9
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	2.475	4.73	-	-	-	-	10
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	8
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	136
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	5.776	4.8	-	-	-	-	110
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	5.835	4.8	-	-	-	-	113
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	6.046	6.47	-	-	-	-	108
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	6.112	6.08	-	-	-	-	149
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	5.902	6.72	-	-	-	-	193
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	5.5	11.74	-	-	-	-	1,240
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	6.664	11.25	-	-	-	-	1,290
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	6.078	6.57	-	-	-	-	623
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	5.765	6.86	-	-	-	-	776
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	2.274	6.98	-	-	-	273	10
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	20
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	26
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	27
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	360
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	360
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	7.39	-	-	-	-	366
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	7.29	-	-	-	-	335
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	6.8	-	-	-	-	40
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	49
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	650
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	670

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1				-				1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	696
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	597
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	590
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	587
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	394
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	458
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	379
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	228
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	45
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	52
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	44
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	42
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	50
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	18,000,000	-	-	-	-	-	-	250
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	19,000,000	-	-	-	-	-	-	15
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	14,000,000	-	-	-	-	-	-	180
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	17,000,000	-	-	-	-	-	-	56
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	16,000,000	-	-	-	-	-	-	33
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	16,000,000	-	-	-	-	-	-	34
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	2.26	5.25	-	-	-	-	24
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	2.198	4.73	-	-	-	-	17
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	20,000,000	-	-	-	-	-	-	29
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	222
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	<0.0002	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	4
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	315
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	<0.0002	-	<0.005	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	10
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	54
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	<0.0005	-	-	-	21
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	6
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	<0.0005	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	<0.0002	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	27
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	1
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	1
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	<0.0002	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	<0.0005	-	-	-	270
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	600	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	<0.0005	-	-	-	686
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	43
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	37
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	44
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	4
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	10
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	16
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	16
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	74
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	59
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	62
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	69
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	1.256	7.25	-	-	-	-	23

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	1.256	-	-	-	-	-	29
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	1.256	7.27	-	-	-	-	30
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	2.559	6.37	-	-	-	-	20
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	2.559	6.37	-	-	-	-	27
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	2.559	6.37	-	-	-	-	28
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	24
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	23
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	30
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	1.54	5.84	-	-	-	-	9
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	1.54	5.78	-	-	-	-	8
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	1.54	5.63	-	-	-	-	14
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	2.105	4.91	-	-	-	-	3
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	2.105	4.96	-	-	-	-	10
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	2.105	4.74	-	-	-	-	10
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	1.519	6.32	-	-	-	-	17
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	1.54	5.41	-	-	-	-	15
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	1.505	5.78	-	-	-	-	15
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	16
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	17
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	1.955	8.64	-	-	-	-	22
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	1.985	6.59	-	-	-	-	20
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	7
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	1.872	6.48	-	-	-	-	7
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	2.841	5.6	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	2.805	4.66	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.03	4.15	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	2.964	4.83	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	2.989	7.22	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.293	4.39	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	3.94	5.16	-	-	-	-	134
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	135
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	135
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	3.845	5.73	-	-	-	-	141
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	4.07	5.44	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.915	5.41	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	4.121	7.04	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	4.202	5.37	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	6.215	5.56	-	-	-	-	73
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	6.425	4.81	-	-	-	-	69
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	5.735	6.27	-	-	-	-	60
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	1
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	3.145	5.02	-	-	-	-	1
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	2.3
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	1
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	3.045	3.87	-	-	-	-	1
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	3.249	4.67	-	-	-	-	<1
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	6.635	6.54	-	-	-	-	189
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	6.935	6.43	-	-	-	-	243
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	7.177	6.87	-	-	-	-	271
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	2.275	5.9	-	-	-	-	158

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	158
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	2.352	5.75	-	-	-	-	121
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	2.401	5.96	-	-	-	-	94
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	100
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	2.401	5.95	-	-	-	-	162
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	3.14	5.67	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.73	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.75	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.92	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.72	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.84	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.97	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.224	6.93	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.224	6.98	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.224	7.15	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.764	5.35	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.764	5.64	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.764	5.79	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.055	6.01	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.055	5.83	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.055	6.26	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	2.34	5.83	-	-	-	-	127
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	2.31	5.84	-	-	-	-	156
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	2.455	5.79	-	-	-	-	150
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	3.18	5.73	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.74	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.89	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.28	5.94	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.45	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.66	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.201	5.89	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.315	6.81	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.315	6.89	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.315	6.9	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.338	5.32	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.338	5.59	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.338	5.75	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.04	6.02	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.04	5.97	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.04	5.73	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	2.315	5.78	-	-	-	-	142
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	168
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	2.325	5.82	-	-	-	-	171
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	2.476	5.73	-	-	-	-	182
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	3.2	5.78	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.27	5.8	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.27	5.86	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	3.27	6.62	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.205	5.83	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.205	5.89	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	3.205	5.92	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.325	6.96	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.325	6.96	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	3.325	7.01	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.343	5.87	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.343	5.87	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	3.343	5.94	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.115	6.2	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	3.115	6.03	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	151
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	144
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	141
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	160
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	154
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	160
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	1.385	5.95	-	-	-	-	186
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	1.385	5.95	-	-	-	-	181
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	1.385	5.95	-	-	-	-	58
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	2.785	5.1	-	-	-	-	148
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	2.785	5.1	-	-	-	-	189
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	2.785	5.1	-	-	-	-	31
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	2.505	4.8	-	-	-	-	139
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	2.505	4.8	-	-	-	-	188
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	2.505	4.8	-	-	-	-	25
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	152
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	107
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	90
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	90
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	1.615	5.53	-	-	-	-	62
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	1.615	5.53	-	-	-	-	62
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	1.425	5.9	-	-	-	-	48
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	1.425	5.9	-	-	-	-	52
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	158
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	161
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	128
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	150
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	130
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	126
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	137
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	173
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	91
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	242
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	206
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	310
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	285
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	444
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	419
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	209
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	407
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	436
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	3.889	6.86	-	-	-	-	401
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	3.889	7.04	-	-	-	-	437
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	3.889	6.74	-	-	-	-	451
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	3.941	6.16	-	-	-	-	375
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	3.941	6.16	-	-	-	-	369

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	3.941	6.16	-	-	-	-	373
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	48
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	47
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	1.498	7.61	-	-	-	-	54
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	358
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	303
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	432
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	454
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	440
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	3.78	4.64	-	-	-	-	80
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	5.085	8.26	-	-	-	-	497
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	5.808	7.21	-	-	-	-	107
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	5.612	6.73	-	-	-	-	121
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	5.88	7.37	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	6.742	7.88	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	6.222	7.04	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	6.762	6.68	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	3.64	5.23	-	-	-	-	104
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	5.463	6.13	-	-	-	-	274
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	6.78	6.48	-	-	-	-	430
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	5.805	6.91	-	-	-	-	431
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	372
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	6.007	8.12	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	6.726	7	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	6.176	8.23	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	16.614	9.76	-	-	-	-	373
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	16.477	9.95	-	-	-	-	358
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	628
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	7.38	-	-	-	-	594
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	7.42	-	-	-	-	570
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	6.76	-	-	-	-	124
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	7.08	-	-	-	-	578
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	123
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	6.76	-	-	-	-	124
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	100
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	64
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	66
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	53
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	67
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	58
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	58
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	493
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	508
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	484
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	391
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	353
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	319

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	Sum of DDD + DDE + DDT	Ammonium as N	Methylene chloride (SIM)	Sulfate as SO4 - Turbidimetric (filtered)	Calcium (filtered)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	CFU/mV	µg/L	m	-	mg/L	µg/L	MG/L	mg/L	mg/L
EQL				500	500	1	1	0.1	0.1	1								1	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2										
AS2159 – 2009 Piling – Design and Installation														5.5					
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)										1				6.5-8					
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	8
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	28
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	19
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	12,000,000	-	-	-	-	-	-	510
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	10,000,000	-	-	-	-	-	-	210
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	3.97	5.15	-	-	-	-	198
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	3.885	6.63	-	-	-	-	242
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	<0.0005	590	-	-	69
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	550	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	42
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	3.694	4.34	-	-	-	-	39
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	3.628	4.58	-	-	-	-	44
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	30
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	<0.0005	1,900	-	-	15
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	1,580	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	46
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	<0.0005	-	-	-	190
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	<0.0005	-	-	-	122
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	1.9	5.97	-	-	-	-	19
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	1.9	5.89	-	-	-	-	19
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	96
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	2.897	4.74	-	-	-	-	66
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	2.897	4.74	-	-	-	-	89
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	2.897	4.74	-	-	-	-	130
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-78.4	-	-	5.64	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	5.64	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	21.3	-	-	6.65	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	6.84	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-26	-	-	6.84	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	47.7	-	-	6.67	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-34.1	-	-	6.71	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-41.7	-	-	6.69	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	6.69	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	6.79	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	54.5	-	-	6.79	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	20.9	-	-	6.7	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	26.1	-	-	6.62	-	-	-	-	-

	Ions													Organic	Explosives		
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation								6,000									
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	8,580	22	4,510	2.41	279	293	-	<4	<4	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	12,300	12	5,620	1.3	393	383	-	<4	<4	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	11,300	1	5,520	1.68	362	375	-	<4	<4	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	11,900	11	5,500	0.75	382	376	-	<4	<4	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	2,990	6	1,430	8.3	94.2	79.8	-	<4	<4	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	2,890	6	1,390	8.13	91.2	77.4	-	<4	<4	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	3,600	8.5	1,600	-	-	-	-	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	2,900	5	1,530	4.73	90.9	82.7	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	8,940	36	3,900	4.76	269	244	-	<4	<4	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	8,750	36	4,410	2.02	263	274	-	<4	<4	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	1,110	5	447	8.88	34.4	28.8	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	559	4	251	4.28	18.4	16.9	-	<4	<4	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	734	2	406	5.94	28.7	25.5	-	<4	<4	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	751	2	401	7.46	29.3	25.2	-	<4	<4	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	610	16	440	-	-	-	-	<5	<5	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	650	2	373	3.21	25.9	24.3	-	<4	<4	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	6,470	30	2,420	14	197	148	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	5,860	32	2,750	3.27	180	168	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	5,180	34	2,920	5.16	160	178	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	5,900	34	2,830	1.8	180	174	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	160	9	188	3.24	11.2	10.5	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	155	5	217	1.46	11.5	11.2	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	284	5	258	6.53	16.5	14.4	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	65	10	85	1.26	9.36	9.6	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	10,000	20	3,000	-	-	-	<50	<5	<5	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	904	11	523	4.61	34.8	31.7	-	<4	<4	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	1,030	12	635	1.78	39.8	38.4	-	<4	<4	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	1,100	14	590	-	-	-	-	<5	<5	<50
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	2,360	11	1,170	9.11	84.6	70.5	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	6,740	4	3,560	3.07	210	197	-	<4	<4	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	6,820	4	3,560	3.76	210	195	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	6,690	20	3,050	0.13	227	227	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	5,890	19	2,510	5.75	204	181	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	6,810	16	2,950	3.18	229	215	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	6,720	17	3,270	1.88	229	238	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	7,330	30	4,090	1.86	246	255	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	6,400	20	3,630	4.63	210	230	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	7,090	27	4,050	3.02	240	255	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	8,240	21	4,140	0.22	279	281	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	5,920	16	2,860	0.75	196	194	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	459	5	215	3.41	15.3	14.3	-	<4	<4	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	5,870	18	3,000	4.04	205	189	-	<4	<4	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	1,090	6	460	8.01	36	30.6	-	<4	<4	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	754	4	306	9.61	25.1	20.7	-	<4	<4	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	9,290	58	4,620	0.53	305	308	-	<4	<4	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	9,530	52	4,300	4.22	312	287	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	9,470	55	4,700	0.07	314	314	-	<4	<4	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	7,980	25	4,290	1.34	277	284	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	5,090	16	2,520	3.39	175	164	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	8,170	20	4,290	0.75	282	278	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	7,680	18	4,070	0.94	270	265	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	7,990	17	4,090	2.7	281	266	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	5,370	15	3,140	3.48	190	204	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	6,580	16	3,480	0.31	230	228	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	2,910	5	1,670	1.86	90.7	87.4	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	1,360	1	958	1.93	45	46.8	<10	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	15,000	6.8	3,700	-	-	-	<50	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	12,000	11	5,000	-	-	-	<50	<5	<5	<50
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	10,800	32	4,920	4.57	369	336	<10	<4	<4	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	9,210	31	4,740	0.22	323	322	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	6,910	23	3,800	0.83	241	245	-	<4	<4	<2
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	8,640	19	3,160	19.2	295	200	-	<4	<4	<2
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	9,200	22	5,600	-	-	-	<50	<20	<4	<5
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	3,300	5.4	2,400	4	-	-	<5	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	4,100	4.8	1,800	-	-	-	<50	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	4,000	4.8	1,900	-	-	-	<50	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	776	1	333	3.95	23.6	21.8	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	782	1	318	5.53	23.9	21.4	54	<4	<4	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	782	1	318	5.53	23.9	21.4	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	754	1	321	4.18	23.1	21.3	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	776	1	333	3.95	23.6	21.8	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	988	4	395	1.62	30	29.1	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	599	8	230	2.56	19	18.1	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	583	7	205	7.03	18.6	16.2	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	51	3,320	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	51	3,320	-	-	-	-	<4	<4	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	2,030	94	1,650	4.34	107	98.1	46	<4	<4	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	9,500	57	4,460	0.27	277	276	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	7,410	<4	<4	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	8,610	53	4,100	0.63	253	256	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	8,550	56	4,000	0.12	251	250	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	8,200	56	3,800	0.84	241	237	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	2,460	40	1,280	5.11	94.2	85	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	2,520	36	1,190	8.8	94.1	78.8	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	1,920	40	1,260	3.74	77.6	83.6	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	2,460	42	1,280	4.39	94.3	86.3	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	692	1	452	5.23	26.2	23.6	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	575	1	423	0.55	22.5	22.2	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	581	<1	403	4.03	22.1	20.4	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	6,490	44	3,100	0.69	196	194	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	6,500	39	2,930	3.97	196	182	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	6,200	36	2,440	10.8	188	152	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	6,360	42	3,030	0.67	191	189	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	68	6	25	0.48	5.6	5.54	-	<4	<4	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	76	5	26	3.12	5.64	6.01	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	3,800	3	2,330	1.42	124	121	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	4,120	3	2,210	6.83	132	115	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	3,590	2	2,080	3.95	117	108	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	3,650	2	2,150	3.01	118	112	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	4,090	3	2,430	1.09	131	128	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	9,240	49	4,230	1.79	271	262	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	9,160	43	4,050	3.73	270	251	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	9,810	44	4,050	7.02	289	251	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	9,450	48	4,470	0.02	279	279	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	10,400	23	4,770	1.88	328	316	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	1,850	11	1,700	25.5	64.6	109	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	2,340	11	1,380	4.71	81.7	89.8	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	1,130	8	504	9.08	44	36.6	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	4,070	71	2,350	1.29	141	138	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	5,300	104	2,890	2.1	181	174	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	4,780	32	2,020	8.89	144	120	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	10,000	41	4,980	0.86	288	293	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	215	9	112	3.04	15.2	14.3	-	<4	<4	<2
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	250	9	118	7.37	16.5	14.2	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	223	9	115	5.54	15.6	14	-	<4	<4	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	7,970	50	4,180	1.85	259	249	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	7,350	36	3,990	2.9	245	231	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	7,180	37	4,100	2.44	247	236	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	7,520	35	3,700	9.05	257	215	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	7,160	42	4,030	1.04	244	239	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	<4	<4	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	14,000	-	6,800	-	-	-	<50	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	7,900	56	7,400	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	3,720	2	2,040	4.3	117	107	-	<4	<4	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	3,970	2	2,070	6.91	124	108	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	5,280	3	2,840	5.04	172	156	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	<4	<4	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	4,000	3	2,160	2.56	117	111	-	<4	<4	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	3,990	4	2,220	1.28	117	114	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	4,310	5	2,090	7.1	126	109	-	<4	<4	<2
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	3,200	5	1,900	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	2,980	4	2,040	9.08	88	106	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	3,460	4	1,840	3.16	102	95.4	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	11,900	22	6,180	5.68	354	396	-	<4	<4	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	12,800	16	5,880	0.67	378	373	-	<4	<4	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	13,700	16	6,110	1.96	403	388	-	<4	<4	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	3,030	13	1,690	4.2	107	98.8	-	<4	<4	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	3,960	14	2,030	5.06	135	122	-	<4	<4	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	5,160	18	2,620	2.55	172	163	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	8,750	64	4,350	1.15	259	253	-	<4	<4	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	9,540	66	4,640	3.77	289	268	-	<4	<4	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	10,400	42	5,530	3.98	328	355	-	<4	<4	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	11,100	32	5,240	0.51	334	330	-	<4	<4	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	7,840	8	3,830	3	227	214	-	<4	<4	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	240	3.2	2,200	-	-	-	-	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	3,640	3	2,190	0.62	115	117	-	<4	<4	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	3,700	3	2,190	0.04	117	117	-	<4	<4	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	8,440	27	3,870	4.47	261	239	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	8,440	27	3,870	4.47	261	239	-	<4	<4	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	7,840	27	3,900	1.52	251	243	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	8,510	25	4,230	2.54	271	257	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	390	3	210	2.52	14.8	14.1	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	532	4	479	4.74	18.8	16.4	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	8,290	47	3,630	2.8	250	237	5,010	<4	<4	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	8,790	52	4,090	1.54	266	258	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	9,050	46	4,480	0.12	276	276	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	7,860	43	3,650	2.36	243	232	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	7,950	50	3,850	<0.01	243	243	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	7,960	52	4,160	3.38	245	262	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	12,400	10	5,640	1.94	370	356	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	13,300	10	5,520	6.41	398	350	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	12,400	8	5,000	7.52	370	318	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	11,800	5	5,250	4.19	347	319	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	10,200	6	5,220	5.03	302	334	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	10,800	5	4,680	4.13	318	293	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	10,800	4	4,750	2.97	318	299	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	9,360	4	4,680	2.6	275	290	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	9,980	5	5,370	6.32	296	336	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	9,900	17	5,700	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	4,200	3.9	5,400	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	8,600	9.9	4,400	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	9,400	9	5,900	15	-	-	<5	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	3,400	6.5	5,700	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	3,300	6.6	5,800	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	7,540	3	4,330	7.88	223	261	-	<4	<4	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	8,720	2	3,950	5	260	235	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	5,900	4.9	6,500	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	5,900	4.9	6,500	-	-	-	<50	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	6,860	20	3,240	5.14	217	196	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	1,890	4	1,440	9.07	59.5	71.3	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	9,920	23	4,620	2.83	311	294	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	<5	<5	<50
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	939	4	538	3.17	30.2	28.4	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	3,540	11	1,710	5.76	108	96.5	14	<4	<4	<2
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	8,030	8	3,750	5.14	235	212	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	3,560	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	2,170	1	1,150	5.7	62.7	55.9	30	<4	<4	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	4,170	1	2,140	4.27	120	110	69	<4	<4	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	350	10	193	4.29	12.1	11.2	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	4,140	<1	2,220	7.15	129	112	-	<4	<4	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	4,150	<1	2,220	7.4	129	111	-	<4	<4	<2
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	7,540	27	3,390	5.29	225	202	1,420	<4	<4	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	7,960	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	2,870	32	1,590	3.49	112	104	<10	<4	<4	<2
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	3,890	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	655	6	310	5.14	20.4	18.4	-	<4	<4	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	720	5	368	4.73	22.4	20.4	-	<4	<4	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	5,730	3	2,700	7.4	170	147	-	<4	<4	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	828	1	489	3.89	25	23.1	-	<4	<4	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	1,990	1	1,190	1.61	58.4	60.3	-	<4	<4	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	2,320	2	1,380	0.96	70.8	69.4	-	<4	<4	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	2,360	2	1,370	2.17	72	68.9	-	<4	<4	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	4,250	4	2,110	4.96	127	115	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	99	6	166	2.94	13	12.3	-	<4	<4	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	114	6	164	2.22	11.8	12.4	-	<4	<4	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	168	6	168	6.68	11.3	13	-	<4	<4	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	<10	<10	<10
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	116	5	178	0.61	10.2	10.1	-	<4	<4	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	129	4	203	6.3	10.6	12	-	<4	<4	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	107	5	159	1.72	9.86	9.53	-	<4	<4	<2
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	172	3	200	5.5	11.9	10.7	-	<4	<4	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	167	5	202	0.93	11.2	11.4	-	<4	<4	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	167	5	198	0.33	11.4	11.4	-	<4	<4	<2
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	1,560	7	1,080	0.1	54.2	54.1	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	1,580	6	1,090	0.55	55	54.4	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	1,910	6	1,200	4.39	65.6	60.1	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	1,130	2	771	4.1	40.2	37	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	922	2	672	1.69	34.1	33	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	1,140	3	863	2.06	40.1	41.8	-	<4	<4	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	1,130	1	704	0.13	33.5	33.4	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	1,130	2	772	2.54	39.3	37.3	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	926	2	792	3.94	35.4	38.3	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	840	3	658	7.66	38.8	33.3	-	<4	<4	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	991	2	808	4.84	44.4	40.3	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	559	2	589	5.54	25.8	28.9	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	504	3	577	8.51	24	28.5	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	420	4.2	360	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	24	7	20	-	1.9	2.48	-	<4	<4	<2
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	26	6	20	-	2.4	2.35	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	4	3	10	-	0.77	1.02	-	<4	<4	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	4	3	5	-	0.65	0.64	-	<4	<4	<2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	9,610	5	4,610	3.38	293	274	-	<4	<4	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	9,720	6	4,610	3.8	296	274	-	<4	<4	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	9,350	6	4,650	1.66	285	276	-	<4	<4	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	9,100	4	4,540	1.3	280	273	-	<4	<4	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	10,200	26	4,870	1.33	298	290	-	<4	<4	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	11,800	23	5,280	4.19	342	315	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	11,500	23	5,920	2.69	334	352	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	3,310	3	1,710	2.98	97.4	91.8	-	<4	<4	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	3,330	3	1,560	9.1	98.3	81.9	-	<4	<4	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	3,700	4.1	1,900	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	3,280	3	1,570	8.06	96.9	82.4	-	<4	<4	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	3,400	3	1,580	9.3	100	83.2	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	3,200	3	1,610	5.68	94.1	84	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	6,000	43	2,500	7.98	191	163	-	<4	<4	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	6,630	50	2,980	1.78	210	203	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	7,100	51	3,210	1.68	226	219	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	5,580	9	3,130	0.71	182	179	-	<4	<4	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	5,630	9	3,160	0.61	183	181	-	<4	<4	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	5,570	52	2,920	4.66	182	166	-	<4	<4	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	5,040	28	2,550	5.92	164	146	-	<4	<4	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	5,180	25	2,900	1	168	164	-	<4	<4	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	7,240	11	3,390	7.96	232	198	-	<4	<4	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	6,660	4	3,530	1.06	208	204	-	<4	<4	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	6,640	4	3,980	5.52	209	234	-	<4	<4	<2
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	7,410	4	3,870	1.12	233	228	-	<4	<4	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	5,660	4	3,100	0.09	180	180	-	<4	<4	<2
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	5,980	4	3,490	3.35	192	205	-	<4	<4	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	6,160	4	3,470	1.8	198	205	-	<4	<4	<2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	7,400	4	3,560	4.6	234	214	-	<4	<4	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	7,990	27	3,800	2.41	250	238	-	<4	<4	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	10,600	9	4,660	5.52	329	295	-	<4	<4	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	10,600	5	4,870	3.06	328	309	-	<4	<4	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	4,570	27	1,900	9.13	144	120	-	<4	<4	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	9,960	4	4,700	2	311	299	-	<4	<4	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	10,500	4	4,600	4.78	325	295	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	11,600	3	5,300	2.87	360	340	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	11,300	4	5,300	1.83	351	338	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	3,140	7	1,580	0.8	98.8	100	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	10,700	3	4,940	2.74	330	313	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	12,100	3	5,570	2.59	374	355	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	855	7	372	5.93	27.6	24.5	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	9,130	3	4,820	3.96	284	307	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	11,800	3	5,840	0.94	368	375	-	<4	<4	<2
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	558	5	636	37.7	17.7	39.2	-	<4	<4	<2
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	8,730	14	3,970	7.16	264	229	-	<4	<4	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	8,790	7	4,150	5.86	266	236	-	<4	<4	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	7,750	5	3,800	4.62	236	215	-	<4	<4	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	8,230	6	4,080	4.04	250	230	-	<4	<4	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	9,450	4	4,220	9.13	285	237	-	<4	<4	<2
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	7,720	3	4,160	0.59	237	234	-	<4	<4	<2
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	7,370	3	4,110	0.64	225	228	-	<4	<4	<2
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	8,790	3	4,460	2.78	264	250	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	9,240	9	4,190	5.47	276	247	-	<4	<4	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	9,320	10	4,230	5.69	281	250	-	<4	<4	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	9,730	5	4,870	0.58	289	286	<10	<4	<4	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	10,300	8	4,810	4.02	309	285	<10	<4	<4	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	9,120	7	4,310	3.57	273	254	-	<4	<4	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	9,180	19	4,460	1.98	274	263	-	<4	<4	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	9,500	7	4,510	2.96	285	268	-	<4	<4	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	9,860	10	4,600	3.31	297	278	-	<4	<4	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	492	16	370	6.97	29.1	25.3	-	<4	<4	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	4,280	18	1,870	5.98	141	125	-	<4	<4	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	3,700	19	1,850	1.25	125	122	309	<4	<4	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	6,240	20	3,180	2.06	200	208	263	<4	<4	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	6,120	20	2,780	3.42	197	184	-	<4	<4	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	9,940	26	4,560	1.71	311	300	-	<4	<4	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	10,100	24	4,150	7.5	319	274	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	4,840	11	2,300	1.14	152	149	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	9,000	18	4,590	3.85	280	302	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	9,640	20	4,710	2.13	300	313	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	10,200	17	4,500	3.76	315	292	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	9,280	16	4,770	4.33	286	312	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	10,300	18	4,690	2.02	318	306	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	10,600	18	4,760	2.86	326	308	-	<4	<4	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	8,740	18	4,670	5.58	270	302	-	<4	<4	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	10,700	18	4,710	3.9	330	305	-	<4	<4	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	259	16	394	1.48	21.9	21.2	-	<4	<4	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	224	17	384	3.2	22.1	20.7	-	<4	<4	<2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	201	18	407	0.39	22	22.2	-	<4	<4	<2
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	11,500	38	5,000	0.72	388	383	-	<4	<4	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	10,800	35	5,220	3.51	358	385	-	<4	<4	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	11,600	71	5,440	2.92	393	416	-	<4	<4	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	12,200	49	5,270	0.66	418	413	-	<4	<4	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	11,500	44	5,410	2.7	396	418	-	<4	<4	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	10,800	9	5,230	1.21	329	321	-	<4	<4	<2
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	7,810	22	3,570	6.78	247	215	-	<4	<4	<2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	2,960	17	1,560	3.97	94.8	87.5	-	<4	<4	<2
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	2,660	13	1,270	4.44	85.8	78.5	-	<4	<4	<2
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	11,500	7	5,500	2.94	353	333	-	<4	<4	<2
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	12,600	9	5,950	0.25	397	395	-	<4	<4	<2
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	7,600	35	4,170	7.18	230	266	-	<4	<4	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	8,430	34	4,070	0.12	265	264	-	<4	<4	<2
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	8,660	30	4,180	0.35	265	267	-	<4	<4	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	5,340	32	2,430	9.47	153	127	-	<4	<4	<2
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	5,020	31	2,770	0.75	148	146	-	<4	<4	<2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	8,920	40	3,440	3.54	267	249	-	<4	<4	<2
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	9,920	35	4,160	1.98	311	299	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	7,670	34	3,880	7.18	237	273	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	4,200	3	2,230	4.34	135	124	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	8,900	35	3,960	1.42	276	284	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	3,590	10	1,740	5.97	120	106	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	4,200	3	2,230	4.34	135	124	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	4,220	2	2,270	4.55	137	125	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	5,090	2	2,440	8.46	158	134	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	5,330	2	2,450	10.6	166	134	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	4,870	1	2,590	2.33	148	141	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	4,480	1	2,370	2.86	137	129	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	4,380	1	2,300	3.85	134	124	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	4,300	2	2,300	3.14	133	124	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	7,630	30	3,200	4.45	231	211	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	6,310	31	3,180	4.53	193	211	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	7,490	28	3,110	4.94	227	205	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	5,400	25	2,860	5	166	183	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	5,420	22	2,410	2.78	165	156	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	4,260	19	1,950	1.1	130	128	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chloride	Potassium (filtered)	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	0.5	0.5	0.01	0.01	0.01	10	4	4	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2									65		550
AS2159 – 2009 Piling – Design and Installation											6,000									
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	111	16	91	3.22	5.52	5.18	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	1,260	14	674	0.41	40.7	40.4	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	357	18	270	7.6	13.7	16	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	<50	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	11,000	58	4,000	-	-	-	<50	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	9,000	39	3,400	-	-	-	<50	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	8,800	7	3,800	4.67	260	237	-	<4	<4	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	8,640	9	4,250	1.4	261	268	-	<4	<4	<2
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	10,600	16	4,880	2.17	309	296	<10	<4	<4	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	11,100	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	10,200	15	4,860	0.17	296	297	-	<4	<4	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	9,850	12	4,640	1.04	288	282	-	<4	<4	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	10,100	16	4,750	1.5	295	286	-	<4	<4	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	9,570	12	3,940	8.17	278	236	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	182	29	193	8.4	12.2	10.3	371	<4	<4	<2
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	86	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	10,300	16	4,920	0.27	299	301	-	<4	<4	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	<4	<4	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	4,630	32	2,200	5.41	146	131	<10	<4	<4	<2
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	6,250	52	3,070	4.15	198	182	<10	<4	<4	<2
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	2,900	1	1,530	5.84	87.4	77.7	-	<4	<4	<2
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	2,870	1	1,550	4.66	86.5	78.8	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	4,300	6.6	2,200	-	-	-	-	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	4,070	4	2,220	1.09	122	120	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	4,320	5	2,320	0.97	129	126	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	3,730	7	1,860	2.95	111	105	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

								pH	Physical Parameters								
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2							4	5	7	10	13
AS2159 – 2009 Piling – Design and Installation								5.5			35,000,000						
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1	6.5-8	7,000								

Monitoring Zone	Location Code	Field ID	Date															
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	7.14	26,100	-	17,500,000	2,000	-	-	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	4.71	34,100	-	27,700,000	11,000	-	-	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	4.36	32,700	-	23,900,000	15,000	-	-	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	6.12	33,100	-	27,400,000	11,000	-	-	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	6.3	8,100	-	5,490,000	21,000	-	-	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	6.33	8,030	-	5,420,000	20,000	-	-	<5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	6.9	5,900	-	3,900,000	22,000	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	6.37	8,840	-	5,500,000	10,000	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	7.78	25,100	-	17,800,000	4,000	-	-	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	7.87	25,500	-	17,800,000	6,000	-	-	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	7.67	3,350	-	2,420,000	4,000	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	8.51	1,840	-	1,430,000	5,000	-	-	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	6.52	2,690	-	1,930,000	<1,000	-	-	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	6.53	2,730	-	1,900,000	2,000	-	-	<5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	7.2	3,100	-	1,700,000	6,600	<5	<5	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	6.46	2,480	-	1,580,000	1,000	-	-	<5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	7.48	17,200	-	11,100,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	7.49	13,400	-	11,100,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	7.51	13,900	-	10,800,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	7.57	17,600	-	12,200,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	8.51	1,120	-	671,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	8	1,070	-	677,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	7.77	1,420	-	821,000	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	7.61	876	-	638,000	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	7.5	16,000	38,000	9,400,000	-	<5	<5	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	7.82	3,230	-	1,920,000	2,000	-	-	<5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	7.82	3,770	-	2,180,000	3,000	-	-	<5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	7.9	3,100	-	1,800,000	9,400	<5	<5	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	7.99	8,040	-	4,850,000	3,000	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	7.07	19,600	-	12,900,000	4,000	-	-	<5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	6.84	19,500	-	13,400,000	1,000	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	6.44	16,700	-	15,500,000	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	6.59	19,800	-	13,700,000	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	6.96	20,300	-	14,200,000	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	6.55	21,100	-	15,700,000	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	7.71	18,800	-	15,200,000	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	7.93	20,100	-	13,200,000	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	7.71	20,500	-	15,700,000	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	7.83	25,000	-	17,200,000	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	7.38	18,600	-	11,800,000	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	7.26	1,480	-	1,160,000	40,000	-	-	<5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	5.94	17,400	-	12,300,000	8,000	-	-	<5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	7.24	3,790	-	2,460,000	26,000	-	-	<5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	7.28	2,500	-	1,630,000	26,000	-	-	<5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	7.18	28,000	-	20,800,000	2,000	-	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
EQL				500	500	1	1	0.1	0.1	1	0.01	1			10,000	1,000	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13	
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000							
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000									
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	7.59	25,400	-	19,400,000	6,000	-	-	-	-	-	
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	7.78	27,200	-	22,200,000	36,000	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	7.48	19,800	-	16,600,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	7.55	12,800	-	10,400,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	7.55	23,900	-	15,600,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	7.78	24,100	-	16,200,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	7.78	24,600	-	16,800,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	17,200	-	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	20,400	-	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	7.1	21,000	28,000	13,000,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	7.1	32,000	5,300	-	-	<5	<5	-	<5	-	
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	7.5	28,300	-	20,000,000	-	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	6.7	26,300	-	22,000,000	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	5.31	25,800	-	20,000,000	16,000	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	5.78	24,600	-	18,600,000	7,000	-	-	-	<5	-	
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	<5	<5	-	<5	-	
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	6.2	11,000	36,000	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	6.5	11,000	40,000	-	-	-	-	-	-	-	
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	6.7	11,000	37,000	-	-	-	-	-	-	-	
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	1,550,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	1,430,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	1,550,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	2,310,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	6.95	2,250	-	1,440,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	6.98	2,230	-	1,410,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	-	
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	7.61	24,700	-	16,100,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	7.34	18,700	-	17,200,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	7.38	25,400	-	19,100,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	7.55	25,700	-	18,900,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	7.23	8,220	-	4,820,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	6.76	7,340	-	4,900,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	7.09	7,350	-	4,860,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	7.06	8,500	-	5,200,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	7.43	2,550	-	1,370,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	6.99	2,240	-	1,280,000	-	-	-	-	-	-	
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-																	

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000		5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000						
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000								
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	7.57	20,700	-	19,500,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	7.6	24,400	-	16,300,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	7.85	20,800	-	17,300,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	7.6	26,700	-	18,800,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	7.42	23,700	-	21,300,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	7.7	7,730	-	4,600,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	7.89	6,240	-	4,110,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	7.36	4,200	-	2,880,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	12	15,900	-	8,030,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	12.2	19,000	-	11,100,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	11.6	13,100	-	8,530,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	10.9	29,100	-	23,700,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	7.57	1,380	-	876,000	13,000	-	-	-	<5	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	7.46	1,440	-	920,000	16,000	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	7.58	1,410	-	889,000	12,000	-	-	-	<5	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	7.45	22,000	-	15,100,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	7.11	19,400	-	15,000,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	7.51	21,300	-	14,000,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	7.53	18,900	-	14,200,000	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	7.55	22,000	-	14,900,000	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	7.6	26,000	-	19,000,000	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	7.5	32,000	-	17,000,000	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	6.18	11,500	-	7,410,000	15,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	6.97	11,500	-	7,120,000	13,000	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	7.28	16,200	-	10,800,000	9,000	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	4.97	12,400	-	8,220,000	12,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	5.24	11,900	-	8,550,000	12,000	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	5.83	12,300	-	7,130,000	11,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	4.2	8,300	-	5,400,000	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	5.55	8,400	-	5,120,000	13,000	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	5.99	9,550	-	6,150,000	12,000	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	6.48	36,800	-	26,600,000	2,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	6.53	37,000	-	25,800,000	2,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	7.93	10,100	-	6,290,000	6,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	7.94	11,900	-	7,640,000	2,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	7.53	15,900	-	10,600,000	12,000	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	11.2	27,200	-	19,000,000	5,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	11	29,300	-	19,600,000	4,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	7.54	33,400	-	22,500,000	<1,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	7.45	35,600	-	25,200,000	2,000	-	-	-	<5	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	3.65	22,000	-	15,200,000	10,000	-	-	-	<5	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	14,700,000	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	17,300,000	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	875,000	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	7.11	1,760	-	1,060,000	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	7.39	25,700	-	16,100,000	-	-	-	-	<5	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	7.35	20,100	-	18,700,000	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000		5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13	
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000							
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000									
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	7.62	23,800	-	16,200,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	7.5	16,900	-	16,400,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	7.51	25,500	-	18,600,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	7.5	24,100	-	18,800,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	6.58	32,700	-	23,900,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	5.78	28,800	-	21,400,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	6.34	20,900	-	22,400,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	6.01	32,400	-	20,800,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	5.2	31,900	-	19,800,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	4.92	26,200	-	17,900,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	5.11	30,100	-	21,700,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	4.95	27,000	-	19,400,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	5.44	28,600	-	19,300,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	8	29,000	7,800	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	5	27,000	41,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	7.1	24,000	520,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	5	-	14,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	5.3	21,000	34,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	5.4	21,000	33,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	6.04	21,500	-	16,400,000	3,000	-	-	-	<5	-	
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	6.52	24,800	-	17,100,000	3,000	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	5.6	29,000	-	20,000,000	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	5.6	29,000	30,000	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	7.17	28,800	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	<5	<5	<5	-	<5	
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	7.08	2,820	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	7.59	10,200	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	5.97	22,200	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	6.37	10,700	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	3.83	6,570	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	5.88	11,900	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	8.05	1,240	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	5.79	12,200	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	5.74	12,200	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	7.1	21,200	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	6.29	21,400	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	12.2	13,600	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	12.1	14,000	-	-	-	-	-	-	-	-	
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-			

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000		5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000						
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000								
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	7.19	966	-	808,000	6,000	-	-	-	<5	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	7.44	925	-	564,000	7,000	-	-	-	<5	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	7.62	1,110	-	1,010,000	10,000	-	-	-	<5	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	7.69	1,100	-	844,000	10,000	-	-	-	<5	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	7.81	1,110	-	627,000	10,000	-	-	-	<5	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	6.22	4,110	-	2,390,000	5,000	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	6.36	3,480	-	2,060,000	5,000	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	6.37	4,100	-	2,420,000	<1,000	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	5.37	3,420	-	1,970,000	6,000	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	6.42	3,860	-	2,340,000	5,000	-	-	-	<5	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	6.49	3,400	-	2,080,000	8,000	-	-	-	<5	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	6.41	3,860	-	2,460,000	9,000	-	-	-	<5	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	6.68	4,220	-	2,760,000	9,000	-	-	-	<5	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	6.14	2,350	-	1,600,000	7,000	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	6.23	2,230	-	1,520,000	10,000	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	6.3	2,300	-	1,400,000	<5,000	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	7.21	159	-	150,000	10,000	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	7.12	240	-	158,000	7,000	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	7.01	68	-	64,000	4,000	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	7.02	71	-	52,000	4,000	-	-	-	<5	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	6.17	27,900	-	19,800,000	5,000	-	-	-	<5	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	6.26	27,500	-	20,200,000	2,000	-	-	-	<5	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	6.31	27,400	-	20,200,000	2,000	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	6.51	27,900	-	19,200,000	4,000	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	5.88	29,400	-	21,400,000	9,000	-	-	-	<5	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	5.1	30,000	-	19,200,000	10,000	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	4.49	31,800	-	23,000,000	12,000	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	5.27	9,390	-	6,220,000	12,000	-	-	-	<5	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	5.5	8,600	-	4,600,000	16,000	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	5.6	9,440	-	6,230,000	11,000	-	-	-	<5	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	4.4	9,330	-	5,590,000	12,000	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	4.04	9,350	-	6,170,000	12,000	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	7.46	16,600	-	11,000,000	12,000	-	-	-	<5	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	7.73	18,400	-	13,200,000	10,000	-	-	-	<5	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	7.34	21,300	-	16,900,000	8,000	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	6.97	17,600	-	12,200,000	8,000	-	-	-	<5	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
EQL				500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000		5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13	
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000							
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000									
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	7.32	17,700	-	12,200,000	9,000	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	6.52	18,000	-	11,200,000	10,000	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	6.66	15,800	-	10,600,000	20,000	-	-	-	<5	-	
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	6.7	16,100	-	11,600,000	11,000	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	6.7	21,900	-	14,600,000	7,000	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	6.79	20,000	-	15,100,000	8,000	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	6.48	20,400	-	13,500,000	9,000	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	6.51	22,300	-	15,400,000	5,000	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	7.13	17,900	-	12,700,000	6,000	-	-	-	<5	-	
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	6.66	19,000	-	12,900,000	7,000	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	6.68	19,600	-	12,800,000	8,000	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	6.62	22,200	-	16,200,000	5,000	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-											

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
EQL				500	500	1	1	0.1	0.1	1	0.01	1			10,000	1,000	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13	
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000							
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000									
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	5.5	32,900	-	29,000,000	12,000	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	5.6	32,400	-	27,100,000	3,000	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	6.77	8,100	-	4,460,000	12,000	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	5.47	27,200	-	21,500,000	5,000	-	-	-	-	-	
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	5.88	31,100	-	27,000,000	3,000	-	-	-	-	-	
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	7.21	2,500	-	1,910,000	8,000	-	-	-	-	-	
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	5.69	25,500	-	21,000,000	6,000	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	6.07	32,800	-	26,300,000	5,000	-	-	-	<5	-	
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	7.6	1,560	-	1,110,000	4,000	-	-	-	<5	-	
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	6.84	25,000	-	19,100,000	6,000	-	-	-	<5	-	
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	6.87	21,000	-	17,800,000	8,000	-	-	-	<5	-	
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	6.85	20,800	-	13,600,000	8,000	-	-	-	<5	-	
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	6.86	24,100	-	15,300,000	8,000	-	-	-	-	-	
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	2,000	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	2,000	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	7,000	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	6,000	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	4,000	-	-	-	<50	-	
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	6,000	-	-	-	<20	-	
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<10	-	
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<10	-	
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	10,000	-	-	-	<5	-	
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	6																

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
EQL				500	500	1	1	0.1	0.1	1	0.01	1			10,000	1,000	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13	
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000							
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000									
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	7.73	29,300	-	19,100,000	5,000	-	-	-	<5	-	
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	7.82	2,310	-	1,580,000	27,000	-	-	-	<5	-	
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	7.76	2,000	-	1,540,000	28,000	-	-	-	<5	-	
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	<5	<5	<5	<5	<5	
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	5.14	31,300	-	23,400,000	7,000	-	-	-	<5	-	
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	8.22	22,300	-	15,900,000	9,000	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	7.54	9,070	-	5,680,000	4,000	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	7.79	8,830	-	5,360,000	4,000	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	5.36	31,900	-	26,700,000	13,000	-	-	-	<5	-	
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	6.61	35,600	-	29,500,000	1,000	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	7.17	21,600	-	13,600,000	3,000	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	7.61	26,300	-	18,200,000	4,000	-	-	-	<5	-	
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	7.66	22,900	-	15,200,000	5,000	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	8.37	13,900	-	8,920,000	9,000	-	-	-	<5	-	
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	9.14	15,500	-	9,680,000	8,000	-	-	-	<5	-	
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-	
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	19,500,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	15,500,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	8,310,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	20,700,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	6.62	12,100	-	8,170,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	8,310,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	6.55	13,200	-	6,830,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	6.19	11,900	-	7,830,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	6.26	11,600	-	7,760,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	6.33	14,800	-	9,420,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	6.48	14,300	-	9,230,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	6.24	13,900	-	8,790,000	-	-	-	-	-	-	
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	6.37	13,600	-	8,660,000	-	-	-	-	-	-	
St Marys																					

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.01	1		10,000	1,000		5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							4	5	7	10	13
AS2159 – 2009 Piling – Design and Installation											5.5			35,000,000						
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1	6.5-8	7,000								
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	7.3	615	-	316,000	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	7.49	4,370	-	2,580,000	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	8.51	1,330	-	764,000	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	7.7	23,000	65,000	12,000,000	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	7.7	16,000	240,000	10,000,000	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	6.53	24,300	-	18,600,000	4,000	-	-	-	<5	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	7.1	25,600	-	17,500,000	35,000	-	-	-	<5	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	5.51	29,800	-	20,700,000	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	5.25	29,900	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	4.91	29,900	-	21,700,000	7,000	-	-	-	<5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	4.65	28,300	-	20,600,000	8,000	-	-	-	<5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	5.18	20,200	-	23,200,000	8,000	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	8.55	1,250	-	702,000	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	8.36	999	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<5	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	6.26	8,390	-	5,260,000	2,000	-	-	-	<5	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	6.3	8,490	-	5,070,000	2,000	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	4.1	10,000	-	7,400,000	8,600	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	5.68	11,500	-	6,930,000	4,000	-	-	-	<5	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	5.89	12,100	-	7,560,000	4,000	-	-	-	<5	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	6.1	10,300	-	6,560,000	4,000	-	-	-	<5	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

	Halogenated Benzenes																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<5	<1	<1	<1	-	<1	<1	<1	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<5	<1	<1	<1	-	<1	<1	<1	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<5	<1	<1	<1	-	<1	<1	<1	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	<1	<1	<1	-	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	<1	<0.01	-	<1	<1	<0.01	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	<1	<0.01	-	<1	<1	<0.01	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<5	<1	<1	<1	-	<1	<1	<1	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2	<2	<2	<2	<5	<5	<5	<5	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	<1	<1	<1	-	<1	<1	<1	-	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	<1	<1	<0.01	-	<1	<1	<0.01	-	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<5	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<1	<1	<1	-	<1	<1	<1	<2	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	<1	<1	<1	<1	<1	<1	<1	-	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	<2	<2	<2	-	<2	<2	<2	-	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	<2	<2	<2	-	<2	<2	<2	-	<2
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<1	<1	<1	-	<1	<1	<1	<5	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<1	<1	<0.01	-	<1	<1	<0.01	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	<1	<1	<0.01	-	<1	<1	<0.01	-	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	<1	<1	<0.01	-	<1	<1	<0.01	-	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<10	<1	<1	<1	-	<1	<1	<1	<10	<1
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	<1	-	<1
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<5	<1	<1	<1	-	<1	<1	<1	<5	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	<2	<2	<50	<50	<50	<50	<2	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	<2	<2	<20	<20	<20	<20	<2	<20
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	<2	<2	<10	<10	<10	<10	<2	<10
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<1	<1	<1	-	<1	<1	<1	<5	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2-dibromoethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	1	1	1	5	1	1	1	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		170	160	260	60				55	2	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	<2	<2	<2	<5	<5	<5	<5	-	<5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2	<2	<2	<2	<5	<5	<5	<5	<2	<5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<5	<1	<1	<1	-	<1	<1	<1	<5	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	<1	<1	<1	-	<1	<1	<1	-	<1

	Halogenated Hydrocarbons																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2							270	400	6,500		
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<5	<5	<1	<5	<1	<1	<1	-	<1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<5	<5	<1	<5	<1	<1	<1	<1	<1
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<10	<10	-	<10	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<1	<1	<1	<1	<1	<1	-	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<5	<5	<1	<5	<1	<1	<1	-	<1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<50	<50	<5	<50	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2						270	400	6,500			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<10	<10	-	<10	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<2	<2	<2	<2	<2	<2	<2	<2	-	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1,1-tetrachloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2						270	400	6,500			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							270	400	6,500		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<10	<10	-	<10	<1	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.01
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							270	400	6,500		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<5	-	<1	<5	<1	<1	<1	<1	-	<1
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<1	<5	<1	<1	<1	-	<1	<1
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<5	<5	<1	<5	<1	<1	<1	-	<1	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5

231 of 405

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							270	400	6,500		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<500	<500	<50	<500	<50	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<200	<200	<20	<200	<20	<20	<20	<20	<20	<20
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<100	<100	<10	<100	<10	<10	<10	<10	<10	<10
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<50	<50	5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1,1-tetrachloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2							270	400	6,500		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloropropene	1,1-dichloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	1	5	1	1	1	1	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2						270	400	6,500			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<5	<5	<1	<5	<1	<1	<1	<1	-	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<50	<50	<5	<50	<5	<5	<5	<5	<5	<5
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	<1	<1	-	<1	<1	<1	-	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	<1	<1	-	<1	<1	<1	-	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	<1	<1	-	<1	<1	<1	-	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	<1	<1	<1	<1	<1	<1	-	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	<1	<1	-	<1	<1	<1	-	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	<1	-	<0.01	<1	<1	-	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<1	<1	-	<0.01	<1	<1	-	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	<1	<1	-	<1	<1	<1	-	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	<1	<1	-	<1	<1	<1	-	-	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	<1	<1	-	<0.01	<1	<1	-	-	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<1	<1	-	<0.01	<1	<1	-	<5	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	<5	<5	<5	<5	<5	<5	<5	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<1	<1	-	<1	<1	<1	-	<5	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	<1	<1	<1	<1	<1	<1	<1	-	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	<2	<2	-	<2	<2	<2	-	-	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	<2	<2	-	<2	<2	<2	-	-	<2
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	<1	<1	-	<1	<1	<1	-	-	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	<1	<1	-	<1	<1	<1	-	<5	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	<1	<1	-	<1	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	<1	<1	-	<1	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<1	<1	-	<0.01	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	<1	<1	<1	<1	<1	<1	<1	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	<1	<1	-	<1	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	<1	<1	-	<1	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	<1	<1	-	<0.01	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	<1	<1	-	<0.01	<1	<1	-	-	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<1	<1	-	<1	<1	<1	-	<5	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	11	<10	<10	<10	<10	<10	<10	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	9	<1	-	<1	<1	<1	-	<10	<1
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	<1	<1	-	<1	<1	<1	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	<1	<1	-	<1	<1	<1	-	<5	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	<50	<50	<50	<50	<50	<50	<50	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	<20	<20	<20	<20	<20	<20	<20	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	<10	<10	<10	<10	<10	<10	<10	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	8	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	9	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	<1	<1	-	<1	<1	<1	-	<5	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2-Dichloroethene	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		1	1	5	1	1	1	5	5	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2			700			1,900	900	1,100			
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	<1	<1	-	<1	<1	<1	-	<5	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	<5	<5	<5	<5	<5	<5	<5	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.1	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.5	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	<1	<1	-	<1	<1	<1	-	-	<1
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	<1	<1	-	<1	<1	<1	-	-	<1

	Chlorinated Hydrocarbons																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	<1	<1	<5	<5	<5	<5	<1	<1
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	12	<50	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	9	<50	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<1	<1	<1	<1	<5	<5	<5	<1	<1
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<1	<1	<1	<5	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<1	<1	<1	<5	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	<1	<1	<5	<5	<5	<1	<1	<1
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<5	<5	<5	<5	<50	<5	<50	<5	<5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<2	<2	<2	<2	<2	<5	<2	<2	<2	<2
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<2	<2	<2	<2	<2	<5	<2	<2	<2	<2
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<5	<5	<5	<5	<50	9	<50	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<1	<1	<1	<1	9	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<1	55	<1	<0.01	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<5	<5	<5	<5	<50	8	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<5	<5	<5	<5	<50	7	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	29	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<5	<5	<5	<5	<50	11	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	6	<5	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<10	<10	<10	<10	<100	<10	<100	<10	<10	<10
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<10	<10	<10	<10	<100	<10	<100	<10	<10	<10
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	3,680	<10	<10
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	4,220	<10	<10
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	4,140	<10	<10
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	3,770	<10	<10
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<1	<1	<1	<1	<5	<5	<5	4,700	<1	<1
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,290	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,500	<5	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,640	<5	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,500	<5	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,450	<5	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,520	<5	<5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	-	<5	<5	<1	<1	<1
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<1	<1	<1	<5	<5	<5	<5	<1	<1	<1
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5

249 of 405

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<5	<5	<5	<5	<50	6	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2016	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<50	<50	<50	<50	<500	<50	<500	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<20	<20	<20	<20	<200	<20	<200	<20	<20	<20
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	3,510	<10	<10
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<10	<10	<10	<10	<100	<10	<100	3,550	<10	<10
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,560	<5	<5
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	1,890	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	997	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	105	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	37	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	54	<50	5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	9	<50	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	13	<50	28	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	8	<50	19	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	6	<50	14	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<5	<5	<5	<5	<50	12	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<5	<5	<5	<5	<50	24	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	18	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<5	<5	<5	<5	<50	9	<50	<5	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	11	<50	<5	<5	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	5	5	5	1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				240			770				
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<5	<5	<5	<5	<50	11	<50	<5	<5	<5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<5	<5	<5	<5	<50	<5	<50	7	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	<1	<1	<1	<5	<5	<5	14	<1	<1
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	13	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	11	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<5	<5	<5	<5	<50	<5	<50	12	<5	<5
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Trichloroethane (1,1,1 & 1,1,2)
EQL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<5	<5	<5	<5	<1	<1	<1	<1	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<5	<5	<5	<5	<1	<1	<1	<1	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<5	<5	<5	<1	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	<1	<1	<1	<1	<10	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	-	-	<1	<1	<1	<1	<1	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.02	-	-	<0.01	<0.02	<1	<1	<0.05	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<0.02	-	-	<0.02	<1	-	<0.05	<0.01	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<5	<5	<5	<5	<1	<1	<1	<1	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	<10	<2	<2	<5	<5	<5	<5	<50
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	<5	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	<5	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	-	-	-	<1	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1	<0.05	<0.01
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	0.09	<5	<5	<5	<0.01	<0.02	<1	<1	<0.05	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<4	<2	<2	<1	<1	<1	<1	<1	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	<1	<1	<1	<1	<1	<10	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<2	-	-	-	<2	<2	<2	<2	<2	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<2	-	-	-	<2	<2	<2	<2	<2	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	-	-	-	-	<1	<1	-	<1	<1
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<5	<5	<5	<1	<1	<1	<1	<5	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	-	-	-	<1	<1	<1	<1	<1	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	-	-	-	<1	<1	<1	<1	<1	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	3.7	-	-	-	<0.01	<0.02	<1	<1	<0.05	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	<1	<1	<1	<1	<1	<10	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	-	-	-	<1	<1	<1	<1	<1	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	-	-	-	<1	<1	<1	<1	<1	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	0.14	-	-	-	-	<0.02	<1	-	<0.05	<0.01
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	0.14	-	-	-	<0.01	<0.02	<1	<1	<0.05	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<5	<5	-	<1	<1	<1	<1	<5	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	<10	<2	<2	6	<5	<5	<5	<50	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	<10	<2	<2	13	<5	<5	<5	<50	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	<10	<2	<2	112	2,260	<10	<10	<100	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	<10	<2	<2	113	2,110	<10	<10	<100	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	<10	<2	<2	49	101	22	<10	260	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	<10	<2	<2	28	31	26	<10	320	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	<10	<2	<2	102	494	25	<10	300	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	<10	<2	<2	45	86	20	<10	240	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<5	<10	<10	<10	45	85	25	<1	250	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	<10	<2	<2	858	979	10	<5	80	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	<10	<2	<2	325	225	12	<5	170	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	<10	<2	<2	489	382	13	<5	170	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	<10	<2	<2	499	555	11	<5	<50	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	<10	<2	<2	486	599	10	<5	<50	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	<10	<2	<2	458	485	11	<5	120	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<5	-	-	-	<1	<1	<1	<1	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<5	-	-	-	<1	<1	<1	<1	<5	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<5	<5	<5	<5	<1	<1	<1	<1	<5	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012	SBT-GW-1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	<10	<2	<2	60	19,300	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	<10	<2	<2	72	24,300	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	<10	<2	<2	62	24,500	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	<10	<2	<2	53	18,800	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	<10	<2	<2	<50	13,600	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	<10	<2	<2	58	19,300	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	<10	<2	<2	<50	14,100	<50	<50	<500	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	<10	<2	<2	43	9,720	<20	<20	<200	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	<10	<2	<2	<10	<10	29	<10	210	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	<10	<2	<2	<10	<10	29	<10	200	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	<10	<2	<2	<5	<5	18	<5	180	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	<10	<2	<2	6	<5	16	<5	260	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	<10	<2	<2	9	5	10	<5	140	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	<10	<2	<2	7	203	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	96	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	68	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	10	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	<10	<2	<2	5	20	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	15	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	11	<5	<5	<50	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	6	<5	<5	<50	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
AS2159 – 2009 Piling – Design and Installation								0.2	0.2		4,000		360		330	70			100	
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	<5	<5	<1	<1	<1	<1	<5	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	5	2	2	1	1	1	1	5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		4,000		360		330	70			100	
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	-	-	-	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	-	-	-	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<5	-	-	-	<1	<1	<1	<1	<5	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	-	-	-	<1	<1	<1	<1	<1	<1
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<10	<2	<2	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	<10	<2	-	<5	<5	<5	<5	<50	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	<10	<2	<2	90	1,900	<5	<5	<50	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<5	<5	<5	<5	6	5	<1	<1	<5	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	<5	12	5	<5	<5	<50	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	<5	8	<5	<5	<5	<50	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	<5	12	5	<5	<5	<50	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	3	-	-	-	<1	<1	<1	<1	<1	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	-	-	<1	<1	<1	<1	<1	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	-	-	<1	<1	<1	<1	<1	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	-	-	<1	<1	<1	<1	<1	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	-	-	<1	<1	<1	<1	<1	-

							Herbicides			Inorganics							
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO ₄ (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO ₃)	Total Suspended Solids (TSS)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation														1,000,000			
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										50,000

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	<2	-	-	<10	70	1,170,000	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	<2	-	-	<10	100	2,220,000	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	<2	-	-	20	210	2,100,000	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	<2	-	-	<10	110	2,150,000	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	<2	-	-	<10	430	339,000	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	<2	-	-	<10	440	333,000	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	<5	<5	-	<50	20	460,000	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	<10	1,580	358,000	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	<2	-	-	<10	110	263,000	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	<2	-	-	<10	120	242,000	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	<10	790	41,000	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	<2	-	-	<10	820	38,000	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	<2	-	-	<10	6,560	328,000	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	<2	-	-	<10	6,640	329,000	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	<5	<5	-	<50	460	290,000	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	<2	-	-	<10	3,260	296,000	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	200	-	-	5,000	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	200	-	-	<1,000	-	28,000
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	300	-	-	20,000	-	32,000
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	200	-	-	11,000	1	16,000
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	200	-	-	237,000	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	200	-	-	169,000	-	68,000
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	300	-	-	141,000	-	26,000
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	200	-	-	160,000	1	18,000
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	<5	<5	<500	-	-	380,000	-	38,000
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	200	-	<5	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	<500	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	<2	-	-	<10	180	87,000	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	<2	-	-	<10	160	103,000	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	<5	<5	-	<50	70	100,000	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	<10	510	234,000	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	<2	-	-	<10	660	702,000	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	20	1,950	627,000	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	300	-	-	1,580,000	-	3,310,000
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	300	-	-	1,520,000	-	792,000
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	200	-	-	1,550,000	-	3,100,000
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	200	-	-	1,650,000	-	560,000
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	400	-	-	689,000	-	90,000
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	600	-	-	596,000	-	40,000
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	600	-	-	736,000	-	27,000
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	300	-	-	1,370,000	-	20,000
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	200	-	-	900,000	-	10,000
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	<2	-	-	460	1,560	43,000	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	<2	-	-	<10	610	1,870,000	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	<2	-	-	370	1,840	133,000	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	<2	-	-	500	1,280	85,000	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	<2	-	-	10	840	1,070,000	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
AS2159 – 2009 Piling – Design and Installation								0.2	0.2				4.4				1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	1,260	1,820	828,000	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	<2	-	-	<10	970	1,190,000	-	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	500	-	-	1,410,000	-	-	71,000
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	600	-	-	784,000	-	-	63,000
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	600	-	-	1,450,000	-	-	35,000
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	600	-	-	1,500,000	-	-	27,000
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	600	-	-	1,570,000	-	-	20,000
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	500	-	1,040	1,230,000	1	-	14,000
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	500	-	1,050	1,370,000	-	-	76,000
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	300	-	-	262,000	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	<100	-	-	249,000	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	<500	-	-	770,000	-	-	28,000
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<5	<5	<500	-	-	550,000	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	<2	-	400	-	-	2,850,000	-	-	124,000
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	400	-	-	2,850,000	-	-	48,000
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	<2	-	-	<10	430	2,210,000	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	<2	-	-	<10	40	2,420,000	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<5	<5	<500	-	-	2,100,000	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	500	-	<5	350,000	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	<500	-	-	380,000	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	<500	-	-	420,000	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	<100	-	-	10,000	-	-	44,000
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	<2	-	<100	-	-	11,000	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	11,000	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	200	-	-	10,000	-	-	195,000
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	<100	-	-	10,000	-	-	44,000
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	<100	-	-	8,000	-	-	58,000
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	100	-	-	8,000	-	-	151,000
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	100	-	-	8,000	-	-	166,000
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	<2	-	200	-	-	<1,000	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	200	-	-	31,000	-	-	1,660,000
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	200	-	-	27,000	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	200	-	-	8,000	-	-	8,000
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	200	-	-	<1,000	-	-	94,000
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	200	-	-	<10,000	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	200	-	-	<1,000	-	-	166,000
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	300	-	-	2,000	-	-	54,000
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	200	-	590	5,000	-	-	24,000
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	300	-	-	31,000	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	200	-	-	33,000	-	-	78,000
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	200	-	850	38,000	-	-	66,000
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	300	-	-	<1,000	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	200	-	-	2,000	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	300	-	-	3,000	-	-	28,000
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	200	-	490	-	-	-	22,000
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	<2	-	-	40	380	52,000	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	20	300	51,000	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	400	-	-	331,000	-	-	<5,000
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	400	-	-	317,000	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	400	-	-	316,000	-	-	11,000
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	400	-	-	318,000	-	-	5,000
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	300	-	-	326,000	-	-	<5,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	400	-	-	16,000	-	-	28,000
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	400	-	-	44,000	-	-	130,000
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	400	-	-	64,000	-	-	18,000
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	400	-	-	26,000	1	-	15,000
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	200	-	-	930,000	-	-	36,000
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	200	-	-	337,000	-	-	18,000
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	200	-	-	429,000	-	-	12,000
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	200	-	-	392,000	1	-	25,000
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	100	-	-	64,000	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	200	-	-	46,000	-	-	62,000
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	<100	-	-	25,000	-	-	62,000
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	<100	-	-	145,000	1	-	44,000
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	<2	-	-	<10	80	143,000	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	<10	80	147,000	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	<2	-	-	<10	90	158,000	-	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	300	-	-	877,000	-	-	32,000
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	600	-	-	955,000	-	-	15,000
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	600	-	-	1,370,000	-	-	20,000
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	500	-	-	1,380,000	-	-	10,000
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	400	-	-	1,120,000	1	-	456,000
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	<2	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	<500	-	-	2,100,000	-	-	43,000
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	<500	-	-	2,000,000	-	-	170,000
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	<2	-	-	<10	50	518,000	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	<10	2,230	545,000	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	<10	640	806,000	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	<2	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	<2	-	-	<10	400	194,000	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	<10	70	194,000	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	<2	-	-	<10	40	201,000	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	<50	<10	160,000	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	<10	40	187,000	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	<10	40	187,000	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	<2	-	-	<10	180	813,000	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	<2	-	-	<10	910	772,000	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	<2	-	-	<10	160	792,000	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	<2	-	-	<10	100	719,000	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	<2	-	-	<10	2,410	760,000	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	<10	660	807,000	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	<2	-	-	10	40	191,000	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	<2	-	-	<10	80	189,000	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	<2	-	-	10	70	852,000	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	<2	-	-	<10	70	604,000	-	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	<2	-	-	<10	260	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	<5	<5	-	-	10	32,000	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	<2	-	-	<10	2,900	562,000	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	<2	-	-	<10	810	542,000	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	532,000	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	<2	-	300	-	-	532,000	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	200	-	-	951,000	-	-	133,000
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	400	-	-	936,000	-	-	9,000
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	100	-	-	95,000	-	-	18,000
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	100	-	-	99,000	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	<2	-	100	-	-	137,000	-	-	20,000
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	200	-	-	257,000	-	-	10,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy- propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	300	-	-	202,000	-	-	22,000
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	300	-	-	310,000	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	200	-	-	197,000	-	-	25,000
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	200	-	-	257,000	-	-	53,000
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	200	-	-	821,000	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	200	-	-	1,010,000	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	300	-	-	834,000	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	300	-	-	629,000	1	-	82,000
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	500	-	-	679,000	-	-	19,000
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	300	-	-	632,000	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	500	-	-	624,000	-	-	21,000
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	300	-	-	526,000	-	-	6,000
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	300	-	-	680,000	-	-	<5,000
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	600	-	-	1,400,000	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	<500	-	-	430,000	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	<500	-	-	1,200,000	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	<100	-	<5	850,000	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	<500	-	-	200,000	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	<500	-	-	200,000	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	<2	-	-	<10	370	462,000	-	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	<10	1,240	619,000	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	<500	-	-	390,000	-	-	30,000
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	<500	-	-	390,000	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	<2	-	400	-	-	682,000	-	<1,000	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	<2	-	300	-	-	281,000	-	<1,000	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	<2	-	200	-	-	1,030,000	-	<1,000	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<5	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	<2	-	300	-	-	68,000	-	<1,000	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	<2	-	-	-	-	269,000	-	<1,000	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	<2	-	<100	-	-	366,000	-	<1,000	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	156,000	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	<2	-	-	-	-	70,000	-	<1,000	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	<2	-	200	-	-	97,000	-	<1,000	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	<2	-	-	-	-	22,000	-	<1,000	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	<2	-	-	-	-	560,000	-	<1,000	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	<2	-	-	-	-	573,000	-	<1,000	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	<2	-	200	-	-	252,000	-	<1,000	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	440,000	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	<2	-	100	-	-	20,000	-	52,000	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	17,000	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	<2	-	-	20	280	44,000	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	<2	-	-	40	200	51,000	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	<2	-	-	<10	90	421,000	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	<2	-	-	<10	40	70,000	-	-	-
St Marys	GW01	GW01-6.5																		

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	<2	-	-	<10	640	57,000	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	<2	-	-	<10	380	60,000	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	<2	-	-	<10	150	69,000	-	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	<2	-	-	<10	270	70,000	-	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	<2	-	-	<10	100	76,000	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	<2	-	-	<10	320	440,000	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	<2	-	-	<10	50	447,000	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	<2	-	-	<10	<20	426,000	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	<2	-	-	<10	90	351,000	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	<2	-	-	<10	160	364,000	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	<2	-	-	<10	70	328,000	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	<10	120	76,000	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	<10	80	311,000	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	<10	110	396,000	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	<2	-	-	<10	160	640,000	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	<10	60	702,000	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	<10	640	399,000	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	<10	560	386,000	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	50	370,000	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	<2	-	-	<10	40	9,000	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	<10	40	12,000	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	<2	-	-	<10	300	3,000	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	<2	-	-	<10	360	3,000	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	<2	-	-	30	90	957,000	-	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	<2	-	-	<10	90	938,000	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	<2	-	-	<10	100	935,000	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	<2	-	-	<10	1,450	1,030,000	-	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	<2	-	-	<10	80	433,000	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	<10	<50	452,000	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	<10	2,520	459,000	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	<2	-	-	<10	<20	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	<2	-	-	<10	90	195,000	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	<2	-	-	<10	40	205,000	-	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	<5	<5	-	<50	310	200,000	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	<2	-	-	<10	320	201,000	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	<10	80	207,000	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	<10	620	186,000	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	<2	-	-	20	80	592,000	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	20	<50	635,000	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	20	2,940	723,000	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	<2	-	-	<10	1,940	865,000	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy- propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	<2	-	-	<10	2,010	870,000	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	<2	-	-	110	2,170	948,000	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	<2	-	-	<100	4,860	875,000	-	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	<2	-	-	<100	11,500	879,000	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	<2	-	-	<100	2,550	1,070,000	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	<2	-	-	<10	330	818,000	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	<2	-	-	60	3,200	863,000	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	<2	-	-	<100	10,900	978,000	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	<2	-	-	<10	110	756,000	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	<2	-	-	<10	2,720	869,000	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	<2	-	-	70	2,480	899,000	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	<2	-	-	<100	4,680	1,010,000	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			µg/L
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
AS2159 – 2009 Piling – Design and Installation								0.2	0.2				4.4				1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	<2	-	-	<10	780	1,020,000	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	<2	-	-	<10	6,440	1,450,000	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	<2	-	-	<10	1,530	1,390,000	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	<2	-	-	<10	5,710	576,000	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	<2	-	-	<10	5,470	1,420,000	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	<2	-	-	<10	10,100	1,360,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	<2	-	-	<10	480	1,560,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	<2	-	-	<10	150	1,510,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	<2	-	-	<10	190	430,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	<10	70	1,370,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	<10	150	1,550,000	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	<10	1,270	100,000	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	<2	-	-	<10	1,480	1,250,000	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	<2	-	-	<10	<50	1,670,000	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	<2	-	-	<10	60	33,000	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	<2	-	-	<10	8,740	630,000	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	<2	-	-	<10	2,800	632,000	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	<2	-	-	<10	18,800	663,000	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	<2	-	-	<10	33,200	654,000	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	<2	-	-	10	820	721,000	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	<2	-	-	<10	650	725,000	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	<2	-	-	<10	100	723,000	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	<10	21,600	698,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	<2	-	-	<10	110	654,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	<2	-	-	<10	<50	762,000	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	<2	-	-	<10	370	639,000	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	<2	-	-	<10	240	672,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	<2	-	-	<10	180	662,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	<2	-	-	<10	<100	658,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	<2	-	-	<10	370	710,000	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	<2	-	-	<10	1,080	733,000	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	<2	-	-	4,310	6,350	40,000	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	<2	-	-	1,970	2,450	311,000	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	<2	-	-	7,020	12,200	85,000	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	<2	-	-	1,680	8,060	382,000	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	<2	-	-	340	6,700	354,000	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	<2	-	-	<10	22,000	769,000	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	<2	-	-	<10	29,400	780,000	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	<2	-	-	<10	280	425,000	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	<2	-	-	<10	5,580	740,000	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	<2	-	-	<10	230	768,000	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	<2	-	-	<10	1,110	739,000	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	<2	-	-	<10	420	676,000	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	<2	-	-	<10	2,320	754,000	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	<2	-	-	<10	<50	762,000	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	<2	-	-	<10	70	642,000	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	<2	-	-	<10	80	802,000	-	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	<2	-	-	<10	50	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	<2	-	-	<10	310	603,000	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	<2	-	-	60	130	622,000	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	<2	-	-	30	520	675,000	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	<2	-	-	-	<50	2,770,000	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	<5	<5	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	<2	-	-	<10	<100	2,360,000	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	<2	-	-	<10	80	2,770,000	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	<2	-	-	-	80	3,110,000	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	<2	-	-	<10	<100	2,970,000	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	<2	-	-	<10	580	1,180,000	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	<2	-	-	110	1,560	705,000	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	<2	-	-	<10	2,140	207,000	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	<2	-	-	<10	1,200	224,000	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	<2	-	-	<10	290	1,360,000	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	<2	-	-	20	940	1,740,000	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	<2	-	-	<10	210	480,000	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	<2	-	-	<10	1,100	744,000	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	<2	-	-	<10	1,780	776,000	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	<2	-	-	<10	520	109,000	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	<2	-	-	<10	580	219,000	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	<2	-	300	-	-	352,000	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	300	-	-	961,000	-	-	37,000
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	300	-	-	672,000	-	-	36,000
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	587,000	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	300	-	-	667,000	-	-	12,000
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	200	-	-	827,000	-	-	17,000
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	300	-	-	587,000	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	300	-	-	592,000	-	-	6,000
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	300	-	-	549,000	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	200	-	-	591,000	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	300	-	-	434,000	-	-	20,000
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	200	-	-	408,000	-	-	60,000
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	200	-	-	422,000	-	-	12,000
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	200	-	-	441,000	-	-	9,000
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	500	-	-	79,000	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	400	-	-	59,000	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	400	-	-	66,000	-	-	370,000
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	500	-	-	45,000	-	-	88,000
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	600	-	-	46,000	-	-	26,000
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	300	-	370	18,000	1	-	113,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	2,4,5-Trichlorophenoxy-propanoic acid	Pronamide	Trifluralin	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity	Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1		2	5	100	10	10	1,000			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				4.4							
AS2159 – 2009 Piling – Design and Installation																	1,000,000			
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										50,000
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	200	-	-	16,000	-	-	52,000
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	200	-	-	130,000	-	-	34,000
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	200	-	-	36,000	-	-	332,000
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	1,000	-	-	790,000	-	-	65,000
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	<500	-	-	740,000	-	-	240,000
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	<2	-	-	<10	960	396,000	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	<2	-	-	<10	2,930	491,000	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	<2	-	700	-	-	480,000	-	<1,000	273,000
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	488,000	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	<2	-	-	<10	540	398,000	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	<2	-	-	<10	2,040	466,000	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	<2	-	-	10	2,500	466,000	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	<10	540	380,000	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	<2	-	400	-	-	94,000	-	54,000	66,000
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	50,000	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	<2	-	-	<10	<50	403,000	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	<2	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	<2	-	300	-	-	446,000	-	<1,000	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	<2	-	300	-	-	771,000	-	<1,000	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	<2	-	-	20	30	216,000	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	20	170	214,000	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	<5	<5	-	<50	140	270,000	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	<10	100	335,000	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	<10	230	335,000	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	<10	210	276,000	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	3,400	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	<10	-	-	-	-	190	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<10	-	-	-	-	90	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	-	-	-	130	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	<10	-	-	-	-	60	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.1	-	-	-	-	120	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<10	-	-	-	-	140	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	40	-	-	-	-

											Nutrients						
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1				900				1,720	140	

Monitoring Zone	Location Code	Field ID	Date																	
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	500	130	<10	320	700	-	600
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	340	<10	<10	10	900	-	900
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	200	20	20	<10	1,700	-	1,700
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	370	290	290	<10	2,100	-	1,800
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	120	2,670	2,670	<10	5,000	-	2,300
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	110	480	480	<10	2,600	-	2,100
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	90	<50	20	<20	1,700	-	1,700
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	240	<10	<10	<10	800	-	800
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	3,980	20	20	<10	4,200	-	4,200
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	3,890	4,180	4,180	<10	9,000	-	4,800
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	60	450	100	350	800	-	400
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	60	590	530	60	4,600	-	4,000
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	310	960	960	<10	19,900	-	18,900
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	300	990	990	<10	18,400	-	17,400
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	8,760	-	-	140	1,400	1,300	<20	10,300	-	8,900
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	120	1,380	1,380	<10	12,300	-	10,900
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	40	2,180	140	140	<10	-	40	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	50	3,160	<10	<10	<10	3,600	60	3,600
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	40	2,550	90	90	<10	3,700	60	3,600
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	40	3,060	10	10	<10	3,300	50	3,300
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	20	90	490	160	330	-	30	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	30	<10	230	230	<10	800	70	600
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	20	<10	480	480	<10	700	30	200
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	170	410	150	120	30	3,200	520	3,100
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	<10	970	<50	<20	<20	900	20	900
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	830	-	<5	<5	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	40	1,100	<50	<20	<20	-	-	<200
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	<50	620	<50	<20	<20	-	-	<200
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	<50	620	<50	<20	<20	<200	<500	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	10	1,380	1,380	<10	2,100	-	700
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	10	1,400	1,400	<10	2,100	-	700
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	<10	1,800	1,800	<20	2,700	-	900
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	130	140	140	<10	<500	-	<500
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	<100	50	50	<10	4,000	-	4,000
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	110	40	40	<10	2,900	-	2,900
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	<10	1,310	630	630	<10	2,300	100	1,700
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	1,230	2,200	2,200	-	3,800	80	1,600
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	<10	840	320	320	<10	1,600	80	1,300
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	60	200	460	310	150	1,400	340	900
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	40	<100	30	30	<10	<500	120	<500
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	440	120	20	20	<10	<500	90	<500
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	840	80	60	20	8,000	-	7,900
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	640	80	80	<10	2,300	-	2,200
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	760	170	170	<10	7,200	-	7,000
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	1,020	210	210	<10	6,100	-	5,900
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	520	420	420	<10	2,800	-	2,400

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	13,800	20	20	<10	24,300	-	24,300
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	2,060	<10	<10	30	7,900	-	7,900
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	80	560	20	20	-	700	100	700
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	510	550	50	40	10	<1,000	<1,000	<1,000
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	40	230	-	<10	<10	<1,000	<50	<1,000
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	170	<10	480	420	60	1,700	340	1,200
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	20	10	470	450	20	1,600	340	1,100
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	70	330	<10	-	-	1,500	420	1,500
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	<10	80	<10	<10	<10	400	<10	400
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	50	20	<50	<20	<20	<200	70	<200
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<200
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	<50	160	<50	<20	<20	600	1,300	600
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	30	130	-	40	<20	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	<10	900	<10	<10	<10	1,500	<50	1,500
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	<10	690	<10	<10	<10	1,300	-	1,300
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	1,020	<100	<100	<10	2,700	-	2,700
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	860	650	650	<10	1,800	-	1,200
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	90	<50	30	<20	-	-	<200
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	120	-	<5	<5	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	<50	120	<50	<20	<20	-	-	<200
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	<50	130	<50	<20	<20	-	-	800
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	<10	50	-	<10	<10	-	30	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	<10	90	330	330	<10	1,100	680	800
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	<10	90	-	<10	<10	-	680	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	<10	40	<10	<10	10	-	70	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	<10	50	<10	<10	<10	-	30	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	<10	420	-	<10	<10	-	320	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	<10	790	20	20	<10	1,700	870	1,700
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	<10	810	<10	<10	<10	1,800	950	1,800
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	12,500	-	-	-	-	80	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	12,500	450	-	-	17,600	80	17,100
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	<50	<10	40	20	20	9,200	80	9,200
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	<10	7,550	<10	<10	<10	8,100	80	8,100
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	<10	7,090	20	20	<10	-	40	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	30	6,740	50	50	<10	8,400	<50	8,300
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	<10	6,460	<10	<10	<10	6,000	<50	6,000
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	50	2,940	250	250	<10	-	40	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	60	2,820	10	10	<10	4,000	130	4,000
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	50	3,730	130	130	<10	4,300	80	4,200
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	120	3,700	3,250	3,250	<10	8,400	190	5,100
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	<10	60	20	20	<10	-	80	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	<10	60	20	20	<10	200	140	200
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	<10	30	40	40	<10	400	280	400
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	80	4,230	30	30	<10	-	<100	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	220	4,520	<10	<10	<10	6,600	310	6,600
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	130	4,680	<10	<10	<10	6,000	160	6,000
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	120	5,460	20	20	-	5,500	160	5,500
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	100	60	60	<10	2,300	-	2,200
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	140	20	10	10	2,000	-	2,000
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	<10	20	60	60	<10	<200	<20	<200
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	<10	<10	20	20	<10	<200	<20	<200
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	<10	20	20	20	<10	<200	<20	<200
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	<10	40	20	20	<10	<200	<20	<200
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	<10	<10	20	20	<10	<200	<20	<200

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	<100	6,280	<10	<10	<10	5,700	<100	5,700
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	20	6,370	30	10	20	6,700	<50	6,700
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	30	6,460	80	80	<10	6,200	<50	6,100
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	<10	6,470	<10	<10	<10	6,700	<50	6,700
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	<10	2,540	<10	<10	<10	2,600	90	2,600
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	<10	1,520	160	110	50	2,200	30	2,000
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	<10	1,170	120	120	<10	2,100	30	2,000
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	<10	1,590	100	100	<10	2,300	<50	2,200
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	<10	3,150	30	30	<10	-	<20	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	<10	3,400	60	60	<10	4,000	20	3,900
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	<10	2,110	50	<10	50	2,600	<20	2,500
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	<10	2,340	80	80	<10	2,700	<50	2,600
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	20	330	300	30	1,100	-	800
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	80	20	20	<10	800	-	800
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	70	50	50	<10	800	-	700
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	<10	5,340	<10	<10	<10	5,000	110	5,000
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	<10	3,180	10	10	<10	4,600	60	4,600
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	<10	3,880	<10	<10	<10	4,500	<50	4,500
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	<10	3,920	70	70	<10	4,100	<20	4,000
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	<10	4,690	80	80	<10	4,900	50	4,800
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	100	80	<50	<20	<20	<200	20	<200
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	110	110	<50	<20	<20	<200	110	<200
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	90	<10	<10	<10	1,600	-	1,600
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	340	<10	<10	<10	4,900	-	4,900
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	190	20	20	<10	600	-	600
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	160	158,000	158,000	20	180,000	-	22,500
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	140	183,000	183,000	10	183,000	-	400
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	230	<10	<10	<10	700	-	700
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	70	60	60	<20	1,060	-	1,000
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	150	70	70	<10	800	-	700
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	160	70	70	<10	1,000	-	900
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	750	40	40	<10	1,500	-	1,500
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	690	960	930	30	4,000	-	3,000
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	660	60	30	30	1,400	-	1,300
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	500	<10	<10	<10	1,000	-	1,000
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	640	10	10	<10	8,200	-	8,200
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	780	20	20	<10	1,200	-	1,200
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	2,630	<10	<10	<10	3,300	-	3,300
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	2,810	30	30	<10	3,700	-	3,700
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	2,070	20	20	<10	2,400	-	2,400
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	1,700	<10	<10	<10	2,000	-	2,000
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	380	40	30	10	2,000	-	2,000
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	80	50	50	<20	<200	-	<200
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	100	30	30	<10	6,000	-	6,000
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	60	30	30	<10	1,900	-	1,900
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	<10	2,960	-	<10	<10	-	<50	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	<10	2,960	<10	<10	<10	3,300	<50	3,300
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	<10	2,100	<10	<10	<10	-	<50	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	<10	2,200	<10	<10	<10	-	<50	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	70	230	-	<10	<10	-	180	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	60	2,480	70	70	<10	-	500	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	5,110	40	40	-	4,900	50	4,900
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	<10	4,320	<10	<10	<10	4,600	70	4,600

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	<10	4,930	20	20	<10	4,400	<50	4,400
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	<10	3,960	50	50	<10	-	80	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	<10	4,530	60	60	<10	4,300	<50	4,200
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	<10	4,500	40	40	<10	4,700	<50	4,700
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	<100	270	<100	<100	<100	-	<100	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	<100	350	<100	<100	<100	1,100	210	1,100
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	<10	130	90	90	<10	-	120	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	<10	300	110	110	<100	1,100	<50	1,000
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	<10	200	50	30	20	<500	<50	<500
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	<10	500	20	<10	20	700	80	700
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	<10	620	150	140	10	800	100	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	<10	400	20	20	<10	500	<50	500
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	<10	310	-	<10	<10	<500	60	<500
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	20	880	<50	<20	<20	-	-	1,500
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	<50	190	<50	<20	<20	-	-	<200
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	20	840	-	<20	<20	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	140	-	<5	<5	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	<50	80	<50	<20	<20	-	-	<200
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	<50	70	<50	<20	<20	-	-	1,100
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	120	<10	<10	<10	2,100	-	2,100
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	180	10	10	<10	4,500	-	4,500
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	<50	150	<50	<20	<20	<200	3,700	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	<50	150	<50	<20	<20	-	-	<200
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	3,580	<10	720	-	3,540	40	5,100	90	1,500
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	113,000	<10	140	-	113,000	<10	138,000	<10	25,500
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	<10	<10	1,950	-	<10	<10	1,800	-	1,800
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	<50	-	-	-	-	-	<10	1,800
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	10	10	140	-	10	<10	1,300	170	1,300
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	<10	<10	310	-	<10	<10	3,000	610	3,000
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	<10	<10	170	-	<10	<10	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	130	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	<10	<10	80	-	<10	<10	300	-	300
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	10	-	50	-	<10	10	600	80	600
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	1,210	40	480	-	1,200	10	2,900	190	1,700
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	<10	<10	40	-	<10	<10	600	160	600
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	20	<10	30	-	20	<10	1,000	200	1,000
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	<10	<10	2,650	-	<10	<10	2,600	-	2,600
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	600	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	20	-	2,170	-	20	<10	2,800	-	2,800
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	3,000	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	<100	590	590	<10	1,500	-	900
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	<100	560	560	<10	1,600	-	1,000
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	<100	10	10	<10	500	-	500
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	<10	2,580	2,580	<10	3,000	-	400
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	20	710	710	<10	900	-	200
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	40	140	140	<10	300	-	200
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	40	30	30	<10	300	-	300
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	140	240	240	<10	1,100	-	900
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	4,350	580	570	10	7,900	-	7,300
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	2,250	<10	<10	<10	4,500	-	4,500
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	1,510	20	20	<10	4,100	-	4,100
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	2,820	280	260	20	5,000	-	4,700

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	3,140	170	150	20	5,600	-	5,400
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	3,660	40	20	20	4,900	-	4,900
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	3,110	1,950	1,940	10	6,000	-	4,000
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	14	-	-	-	3,110	1,940	1,920	20	7,400	-	5,500
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	1,980	1,550	1,520	30	5,000	-	3,400
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	210	270	270	<10	1,900	-	1,600
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	140	270	270	<10	800	-	500
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	330	130	120	10	700	-	600
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	200	<10	<10	<10	600	-	600
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	90	110	100	10	900	-	800
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	120	70	60	10	600	-	500
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	220	650	640	10	1,800	-	1,100
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	140	90	90	<10	500	-	400
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	240	40	20	20	800	-	800
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	100	20	<10	50	600	-	600
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	140	10	<10	50	600	-	600
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	730	1,120	880	240	4,800	-	3,700
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	880	160	<10	260	3,900	-	3,700
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	820	330	70	260	2,830	-	2,500
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	80	550	530	20	1,000	-	500
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	50	490	490	<10	1,100	-	600
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	80	760	760	<10	2,200	-	1,400
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	140	700	700	<10	2,400	-	1,700
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	100	<10	<10	<10	200	-	200
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	110	<10	<10	<10	300	-	300
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	100	<10	<10	<10	300	-	300
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	100	3,050	3,050	<10	5,800	-	2,700
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	760	<10	<10	<10	1,100	-	1,100
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	520	10	10	<10	1,100	-	1,100
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	510	3,330	3,330	<10	4,300	-	1,000
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	40	70	50	20	500	-	400
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	80	80	80	<10	600	-	500
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	<100	90	90	<10	300	-	200
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	4,000	1,500	1,300	180	<200	-	<200
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	<100	840	840	<10	1,600	-	800
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	50	110	110	<10	600	-	500
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	40	100	80	20	400	-	300
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	130	480	480	<10	1,500	-	1,000
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	190	340	340	<10	1,500	-	1,200
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	190	290	280	10	1,100	-	800
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	200	50	50	<10	5,000	-	4,900

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	200	<10	<10	<10	5,500	-	5,500
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	200	<10	<10	<10	5,000	-	5,000
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	340	80	10	70	12,300	-	12,200
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	340	30	<10	60	27,500	-	27,500
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	200	<10	<10	<10	<5,000	-	<5,000
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	380	<10	<10	<10	1,500	-	1,500
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	270	20	20	<10	5,500	-	5,500
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	560	20	20	<10	<10,000	-	<10,000
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	180	<10	<10	<10	800	-	800
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	180	40	30	10	9,800	-	9,800
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	200	40	40	<10	9,700	-	9,700
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	210	<10	<10	<10	<5,000	-	<5,000
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	<100	300	240	60	4,300	-	4,000
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	<100	50	30	20	29,800	-	29,700
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	<100	30	10	20	6,200	-	6,200
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	150	370	320	50	19,600	-	19,200
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	<100	280	260	20	15,300	-	15,000
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	<100	60	50	10	28,300	-	28,200
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	240	50	50	<10	2,600	-	2,500
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	240	20	20	<10	1,400	-	1,400
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	730	170	130	40	3,200	-	3,000
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	240	<10	<10	<10	1,100	-	1,100
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	220	<10	<10	<10	1,100	-	1,100
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	500	90	<10	270	6,000	-	5,900
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	290	<10	<10	10	5,800	-	5,800
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	230	<10	<10	<10	700	-	700
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	30	310	310	<10	900	-	600
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	<100	20	10	10	15,300	-	15,300
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	<100	<10	<10	<10	5,200	-	5,200
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	140	50	40	10	20,200	-	20,100
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	150	40	30	10	47,400	-	47,400
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	120	60	60	<10	1,700	-	1,600
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	280	70	70	<10	1,700	-	1,600
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	190	20	20	<10	1,100	-	1,100
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	170	<10	<10	<10	31,800	-	31,800
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	240	60	60	<10	700	-	600
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	260	70	60	10	<500	-	<500
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	140	10	10	<10	<2,000	-	<2,000
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	400	10	10	<10	<2,000	-	<2,000
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	<100	50	30	20	<1,000	-	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	<100	30	30	<10	<1,000	-	<1,000
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	<100	20	20	<10	2,000	-	2,000
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	270	30	30	<10	5,200	-	5,200
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	42,500	<10	<10	<10	52,600	-	52,600
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	26,000	<10	<10	<10	30,600	-	30,600
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	40,700	<100	<100	<100	61,800	-	61,800
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	16,000	20	20	<10	34,300	-	34,300
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	26,000	90	90	<10	37,700	-	37,600
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	3,670	40	40	<10	64,000	-	64,000
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	2,730	90	90	<10	80,500	-	80,400
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	370	<10	<10	<10	1,000	-	1,000
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	880	60	60	<10	13,000	-	12,900
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	1,080	<10	<10	<10	2,100	-	2,100
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	1,000	<10	<10	<10	3,800	-	3,800
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	990	<10	<10	<10	2,000	-	2,000
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	900	20	20	<10	7,100	-	7,100
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	820	<10	<10	<10	5,200	-	5,200
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	1,250	<10	<10	<10	1,500	-	1,500

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	1,320	<10	<10	<10	2,800	-	2,800
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	8,650	<10	<10	<10	13,200	-	13,200
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	7,320	30	30	<10	11,600	-	11,600
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	6,940	<10	<10	<10	10,200	-	10,200
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	6,620	10	10	<10	11,500	-	11,500
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	630	10	10	<10	800	-	800
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	380	<10	<10	<10	<1,000	-	<1,000
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	1,300	30	30	<10	1,600	-	1,600
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	800	10	10	<10	800	-	800
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	460	20	20	<10	<1,000	-	<1,000
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	480	360	360	<10	1,300	-	900
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	470	10	10	<10	3,500	-	3,500
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	310	<10	<10	<10	5,900	-	5,900
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	130	190	190	<10	<1,000	-	<1,000
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	110	<10	<10	<10	700	-	700
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	360	<10	<10	<10	2,000	-	2,000
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	1,120	<10	<10	<10	1,700	-	1,700
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	1,070	10	10	<10	3,100	-	3,100
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	630	100	80	20	2,300	-	2,200
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	1,390	100	<10	100	3,400	-	3,300
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	1,380	30	<10	80	4,800	-	4,800
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	<10	2,960	<10	<10	<10	3,000	<50	3,000
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	<10	2,140	<10	<10	<10	-	<50	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	<10	760	-	270	100	-	130	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	<10	30	10	10	<10	-	40	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	<10	2,120	-	<10	<10	-	<20	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	<10	70	3,430	3,430	<10	3,800	<20	400
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	<10	30	-	10	<10	-	40	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	<10	<100	10	10	<10	1,000	<50	1,000
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	<100	40	<100	<100	<100	<200	<100	<200
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	<100	<10	<100	<100	<100	<200	<100	<200
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	<10	40	<10	<10	<10	<200	110	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	<10	30	50	50	<10	<200	<20	<200
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	<10	30	<10	<10	<10	<200	<20	<200
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	<10	30	<10	<10	<10	<200	<20	<200
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	1,060	70	70	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	<10	1,070	50	30	20	-	<20	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	<10	1,220	20	20	<10	1,800	170	1,800
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	<10	1,220	20	<10	20	1,200	100	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	<10	1,140	<10	<10	<10	1,600	<20	1,600
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	<10	940	70	70	<10	1,100	120	1,000

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	200		10	10	10	10	10	100	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2					900						
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1				900				1,720	140	
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	<10	870	190	160	30	1,700	20	1,500
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	<10	770	<10	<10	<10	1,400	10	1,400
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	10	760	100	<10	100	1,400	70	1,300
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	40	1,300	<50	<20	<20	600	60	600
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	<10	1,200	<50	<20	<20	<200	20	<200
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	40	30	<50	<20	<20	<200	190	<200
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	220	20	20	<10	5,800	-	5,800
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	250	50	10	40	5,400	-	5,400
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	<10	-	590	-	<10	<10	800	70	800
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	550	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	500	<100	<100	<10	2,300	-	2,300
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	850	<10	<10	<10	9,300	-	9,300
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	450	<10	<10	<10	8,100	-	8,100
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	630	<10	<10	<10	2,200	-	2,200
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	50	-	2,240	-	<10	250	3,200	120	3,100
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	2,310	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	540	<10	<10	<10	800	-	800
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	20	<10	690	-	20	<10	900	-	900
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	10	<10	240	-	<10	10	500	30	500
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	90	<10	<10	<10	400	-	400
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	80	<10	<10	<10	600	-	600
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	<10	290	290	<20	3,190	-	2,900
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	90	630	630	<10	2,200	-	1,600
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	90	240	240	<10	1,200	-	1,000
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	100	640	640	<10	1,800	-	1,200
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	5,700	4,800	-	40	-	4,500	280	11,000	-	5,800
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	200	470	-	100	-	450	<20	800	-	300
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	200	-	40	-	170	30	600	-	400
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	<50	-	50	-	-	-	200	-	200
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	310	-	110	-	310	<20	600	-	300
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	130	-	<10	-	130	<20	<200	-	<200
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	340	-	<10	-	340	<20	<340	-	<200
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	310	-	40	-	310	<20	300	-	<200
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	300	70	-	30	-	70	<20	400	-	300

							Monocyclic aromatic hydrocarbons										
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (II+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<1	<1	<1	<1	<3	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<1	<1	<1	<1	<3	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<1	<1	<1	<1	<3	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<1	<1	<1	<1	<3	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<3	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<1	<1	<1	<3	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<1	<1	<1	<1	<3	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<5	<5	<5	<5	-	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<1	<1	<1	<1	<3	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<1	<1	<1	5	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	<3	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<1	<1	<1	<1	-	<1	<1	<1	<1	<1
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<2	<2	<2	<2	84	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<2	<2	<2	<2	78	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	<1	<1	<1	<3	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<1	<1	<1	<1	49	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<1	<1	<1	<1	4	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<1	<1	<1	<1	-	<1	<1	<1	<1	<1
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<1	<1	<1	<1	8	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	<1	<1	8	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<1	<1	<1	3	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<1	<1	<1	<1	3	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	8	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<50	<50	<50	<50	-	<50	<50	<50	<50	<50
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<20	<20	<20	<20	-	<20	<20	<20	<20	<20
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<10	<10	<10	<10	-	<10	<10	<10	<10	<10
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<1	<1	<1	<1	4	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	1	1	1	1	3	5	5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2				30							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	<3	-	-	-	-	-

								PFAS TOPA											2-Picoline
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post-Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) (TOPA)	Perfluoropentanesulfonic acid (TOP)			
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
EQL	500	500	1	1	0.1	0.1	1										2		
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2													
AS2159 – 2009 Piling – Design and Installation																			
PFAS NEMP 2020 Freshwater 99%																			
WSA SBT - EPL 21672 (amended 10 May 2023)							1												

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	<5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	<0.001	<5
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	<0.001	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	<5
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	<0.001	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	-	-	-	-	-	<0.001	-	<5
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	<2
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	<0.001	-	<5
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	0.0311	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	0.04	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.001	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	<0.001	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	<0.001	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	-	-	<5
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<10
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0119	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (TOPA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE) (TOPA)	N-Methyl perfluorooctane sulfonamide (MeFOSA) (TOPA)	N-Methyl perfluorooctane sulfonamidoacetic acid (TOPA)	Perfluorooctane sulfonamide (FOSA) (TOPA)	Post- Perfluorohexadecanoic acid (PFHxDA) (TOPA)	Sum of enHealth PFAS (PFHXS + PFOS + PFOA) TOPA	Perfluoropentanesulfo nic acid (TOP)	2-Picoline
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1										2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	<0.001	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0012	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	<0.001	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	0.0029	<0.001	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-GW02	SMGW_ GW02_ S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	SMGW-GW02	SMGW_ GW02_ D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	<5
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<0.01	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	0.01	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<0.01	-	-

	Nitroaromatics									Other							
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<10	<5	-	-	-	-	<5	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<5	<5	-	-	-	-	<5	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<5	<5	-	-	-	-	<5	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<5	<5	-	-	-	-	<5	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2	<2	-	-	-	-	<2	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<5	<5	-	-	-	-	<5	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<2	<2	-	-	-	-	<2	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2	<2	-	-	-	-	<2	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<2	<2	-	-	-	-	<2	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<2	<2	-	-	-	-	204	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5	<5	-	-	-	-	<5	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<5	<5	-	-	-	-	<5	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<10	<10	-	-	-	-	<10	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<5	<5	-	-	-	-	<5	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	-	-	-	-	<5	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-aminobiphenyl	Pentachloronitrobenzene	Penconazole*	Sodium Acifluorfen	2,2,4-Trimethylpentane	Tetradecane	Acetophenone	Caprolactam	Butyric Acid	Carbon Monoxide
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/m3	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2					2			
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2	<2	-	-	-	-	3	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2	<2	-	-	-	-	<2	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<5	<5	-	-	-	-	<5	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	<10	-	-	<0.01	<0.1	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	<0.2	<1	-	<0.1	-	-	-	3
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	<10	-	-	<0.01	<0.5	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Particle Size	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
EQL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		µg/L	µg/L	µg/L	µg/L
	500	500	1	1	0.1	0.1	1								5	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																		
PFAS NEMP 2020 Freshwater 99%																		
WSA SBT - EPL 21672 (amended 10 May 2023)							1											

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidialdehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidialdehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	<5	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidialdehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-

312 of 405

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidialdehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	<5	<5	<5
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Silica (SiO2)	Tebuconazole	Coarse Gravel 19-26.5mm	Arochlor 1016	Arochlor 1221	Arochlor 1232
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1								5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	<0.01	<10	<0.1	-	<0.01	<0.1	<0.1	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	<10	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	<0.01	<10	<0.1	-	<0.01	<0.5	<0.5	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	<2	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	<10	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	<1	-	-	-	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	<10	-	-	-	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

	PCBs												2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)					
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	0.03	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	<0.05	<0.0001	<0.01	<0.001	<0.001
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	<0.05	-	-	<0.001	<0.001
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.02	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-[N-methyl(perfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<0.02	<0.02
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<0.02	<0.02
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	<0.05	0.0002	<0.01	<0.001	<0.001
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	<0.02	<0.02
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	<0.02	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	<0.005	-	-	0.035	0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	<0.05	-	-	0.024	0.008
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	<0.05	-	-	0.027	0.009
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	<0.02	<0.02
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	-	<1	-	-	-	0.03	<0.02
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.05	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	<1	-	-	-	<0.05	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	<0.0001	<0.01	<0.001	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	-	-	-	-	-	<0.0006	<0.0006
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.001	<0.001
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.0007	<0.0007
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	<0.0007	<0.0007
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.05	<0.05
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	<0.005	-	-	<0.0004	<0.001
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	0.0003	<0.001	<0.001	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	-	-	-	-	-	-	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	<5	-	<5	-	-	-	-	<0.01	<0.01
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.0096	0.0042
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.0077	0.003
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.124	0.0446
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	0.0941	0.0349
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	0.0848	0.0552
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	<1	-	-	-	0.0135	0.0053
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	-	<1	-	-	-	0.0144	0.0057
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0016	<0.0016
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0016	0.0016
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0016	0.0024
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	-	-	-	-	-	<0.001	0.001
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-[N-methyl(perfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	<0.002	<0.002
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	0.013	0.0039
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	0.0124	0.0039
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	0.0142	0.0042
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.002	<0.002
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0007	<0.0007
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0007	<0.0007
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0007	<0.0007
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0009	<0.0009
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0009	<0.0009
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0009	<0.0009
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0007	<0.0007
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0007	<0.0007
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	<1	-	-	-	<0.0009	<0.0009
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0009	<0.0009
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	0.0058	0.0023
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	0.0068	0.0026
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0016	<0.0016
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0016	0.0016
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	0.03	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	0.03	<0.02
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	<1	-	-	-	0.0939	0.0099
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	<1	-	-	-	0.076	<0.002
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	0.0876	0.0101
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	0.1	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	0.04	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0005	<0.0005
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	<1	-	-	-	<0.0005	<0.0005
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<5	<5	<5	<5	<5	-	-	-	<0.001	<0.001
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	-	<1	-	-	-	0.0145	0.0104
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.0005	<0.0005
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0008	<0.0008
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	<1	-	-	-	<0.05	<0.05
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	0.001	<0.001
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	0.0004	<0.001
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)ethanol (N-MeFOSE)	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	5	5	5	1				0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.6		0.03							
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	0.001	<0.001
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	<0.005	<0.001	<0.001	<0.001	<0.001
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.001	<0.001
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	<0.05	0.0003	<0.01	<0.001	<0.001
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	<0.001	<0.001
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	<0.05	0.0019	<0.01	<0.001	<0.001
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	<0.001	<0.001
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	0.001	<0.0005
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	<1	-	-	-	<0.0008	<0.0008
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	<1	-	-	-	0.001	<0.0008
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	<0.02	<0.02
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<0.02	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.09	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.1	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	0.09	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%										0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	0.05	<0.02	0.03
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	0.05	<0.02	0.03
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	0.01	-	<0.01	-	<0.1	<0.02	0.05	<0.02	0.04
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	0.03	-	<0.01	-	<0.1	<0.02	0.02	<0.02	0.04
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<0.01	-	<0.01	-	<0.1	<0.02	0.03	<0.02	0.04
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<0.01	-	<0.01	-	-	-	-	<0.01	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<0.01	-	0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<0.01	-	<0.01	-	-	-	-	<0.01	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<0.001	<0.001	<0.0001	<0.001	<0.05	<0.01	<0.01	<0.01	<0.005
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	<0.01	-	<0.01	-	-	-	-	<0.01	<0.01
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<0.001	<0.001	0.0003	<0.001	<0.05	<0.01	<0.01	<0.01	<0.005
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<0.01	-	<0.01	-	-	-	-	<0.01	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.01	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.001	<0.001	0.0002	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<0.001	<0.001	<0.0001	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	0.014	<0.001	0.0091	<0.002	0.004	0.002	0.018	0.002	0.0027	0.003
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	0.019	<0.001	0.0091	<0.001	<0.05	<0.01	0.03	<0.01	<0.01	<0.005
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	0.024	<0.001	0.012	<0.001	<0.05	<0.01	0.03	<0.01	<0.01	<0.005
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	0.08	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<0.01	-	0.03	-	<0.1	0.02	0.03	<0.02	<0.01	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<0.001	<0.001	-	<0.001	<0.05	<0.01	<0.01	<0.01	-	<0.005
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<0.0006	<0.0006	<0.0006	<0.0006	<0.003	<0.0006	<0.0006	<0.0006	<0.0006	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.003	<0.0007	<0.0007	<0.0007	<0.0007	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.004	<0.0007	<0.0007	<0.0007	<0.0007	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%												0.00023							19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<0.001	<0.001	0.0005	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	0.006
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<0.001	<0.001	<0.0001	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<0.001	<0.001	<0.0003	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	0.0007	<0.001	0.002	<0.002	<0.02	<0.002	0.0094	0.006	0.0006	0.021
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<0.001	<0.001	0.0004	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	0.011
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<0.001	<0.001	0.0004	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	0.012
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<0.001	<0.001	-	<0.001	<0.005	<0.001	<0.001	<0.001	-	0.007
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<0.001	<0.001	0.0003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.007
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.01	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	0.03	0.09	<0.02	0.02	<0.05
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	0.0025	<0.0005	0.0126	<0.0005	0.002	0.0029	0.0045	0.0029	0.0011	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	0.0016	<0.0005	0.016	<0.0005	0.002	0.0027	0.0037	0.0019	0.0008	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	0.0274	<0.0005	0.0007	<0.0005	0.008	0.0131	0.062	0.0448	0.0168	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	0.0362	<0.0008	0.0059	<0.0008	<0.004	0.0048	0.0158	0.018	0.0344	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	0.0544	0.0017	0.0022	<0.0008	0.004	0.0065	0.0264	0.0343	0.0579	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	0.0058	0.0014	0.0494	<0.0008	0.032	0.0095	0.0167	0.0064	0.0165	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	0.0059	0.0012	0.05	<0.0008	0.034	0.0094	0.0167	0.0075	0.0169	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	0.009	0.0078	0.881	<0.0016	<0.008	0.0205	0.0269	0.0101	0.0427	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	0.0085	0.0056	0.95	<0.0016	<0.008	0.02	0.0226	0.0115	0.0496	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	0.0096	0.0066	0.84	<0.0016	0.01	0.029	0.0258	0.0157	0.0563	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<0.01	<0.02	1.07	<0.02	<0.1	<0.02	<0.02	<0.02	0.05	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	0.006	0.004	1	<0.001	<0.05	<0.01	<0.01	<0.01	0.04	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<0.01	-	0.73	-	<0.1	<0.02	<0.02	<0.02	0.02	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<0.01	-	0.93	-	<0.1	<0.02	<0.02	<0.02	0.02	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<0.01	-	0.81	-	<0.1	<0.02	<0.02	<0.02	0.02	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<0.01	-	0.64	-	<0.1	<0.02	<0.02	<0.02	0.02	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<0.01	-	0.73	-	<0.1	<0.02	<0.02	<0.02	0.02	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	0.0054	<0.0005	0.0005	<0.0005	<0.002	0.0016	0.003	0.0019	0.0027	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	0.0056	<0.0005	0.0004	<0.0005	<0.002	0.0011	0.0027	0.002	0.0026	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	0.0056	<0.0005	0.0006	<0.0005	<0.002	0.0013	0.0033	0.0023	0.003	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<0.01	-	<0.01	-	-	-	-	-	<0.01	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.004	<0.0008	<0.0008	<0.0008	<0.0008	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.004	<0.0008	<0.0008	<0.0008	<0.0008	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<0.01	-	<0.01	-	-	-	-	-	<0.01	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<0.0007	<0.0007	0.0081	<0.0007	<0.004	<0.0007	0.0064	<0.0007	0.0015	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<0.0007	<0.0007	0.0016	<0.0007	<0.004	0.0016	0.0012	<0.0007	<0.0007	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<0.0007	<0.0007	0.0016	<0.0007	<0.004	0.0016	0.0013	<0.0007	<0.0007	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.004	<0.0009	0.0074	<0.0009	0.001	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.004	<0.0009	0.0022	<0.0009	<0.0009	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.004	<0.0009	0.0017	<0.0009	<0.0009	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	0.0008	<0.0007	0.0063	<0.0007	<0.004	<0.0007	0.0012	<0.0007	0.0019	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	0.0008	<0.0007	0.0044	<0.0007	<0.004	<0.0007	0.0012	<0.0007	0.0016	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<0.0009	<0.0009	0.002	<0.0009	<0.004	<0.0009	0.0012	<0.0009	0.0016	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	0.0009	<0.0009	0.0021	<0.0009	<0.004	<0.0009	0.0014	<0.0009	0.0016	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1																			

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
AS2159 – 2009 Piling – Design and Installation								0.2	0.2											
PFAS NEMP 2020 Freshwater 99%													0.00023						19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	0.127	<0.0008	0.115	<0.0008	<0.004	0.506	0.808	0.145	0.286	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	0.158	<0.002	0.117	<0.002	0.26	0.324	0.789	0.167	0.362	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	0.147	0.0082	0.117	0.0008	0.198	0.522	0.708	0.121	0.296	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	0.07	-	0.13	-	0.1	0.26	0.69	0.11	0.26	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	0.06	-	0.11	-	<0.1	0.18	0.29	0.06	0.18	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<0.0005	<0.0005	0.0016	<0.0005	<0.002	<0.0005	0.0029	<0.0005	0.0007	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	0.0006	<0.0005	0.0017	<0.0005	<0.002	<0.0005	0.0022	<0.0005	0.0008	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<0.001	<0.001	0.0013	<0.001	<0.005	<0.001	0.002	<0.001	<0.001	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<0.0008	<0.0008	0.0016	<0.0008	<0.004	<0.0008	<0.0008	<0.0008	0.0012	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	0.0101	<0.0008	0.0015	<0.0008	<0.004	<0.0008	0.0077	0.0078	0.0145	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	0.001	<0.0005	0.0019	<0.0005	<0.002	<0.0005	0.002	<0.0005	0.0014	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<0.0008	<0.0008	0.0012	<0.0008	<0.004	<0.0008	0.0013	<0.0008	0.0013	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0002	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0002	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	0.0002	<0.001	0.0003	<0.002	0.004	<0.002	0.0007	<0.0004	0.0006	0.002
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0009	<0.001	<0.005	<0.001	0.001	<0.001	0.011	<0.005
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.001	<0.001	<0.005	<0.001	0.001	0.001	0.012	<0.005
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	0.002	<0.001	0.001	<0.002	<0.02	<0.002	0.002	0.001	0.016	0.002
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	6:2 Fluorotelomer Sulfonate (6:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.0005	0.0005	0.0001	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%												0.00023							19	
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0004	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	0.0008	<0.001	0.0005	<0.002	<0.002	<0.002	0.0006	<0.0004	0.0004	0.0005
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0002	<0.001	<0.005	<0.001	<0.001	<0.001	0.001	<0.005
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<0.0005	<0.0005	<0.0003	<0.0005	0.002	0.0021	0.0034	0.0006	0.002	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.001	<0.001	0.0003	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0002	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<0.0005	<0.0005	0.0014	<0.0005	0.007	0.0021	0.0021	<0.0005	0.0006	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.001	0.001	0.003	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.001	<0.001	0.0019	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.001	0.0002	<0.001	<0.05	<0.01	<0.01	<0.01	<0.01	<0.005
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	0.001	<0.0005	0.0009	<0.0005	0.044	0.0036	0.0078	0.001	0.0048	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<0.0008	<0.0008	0.0067	<0.0008	<0.004	<0.0008	0.0025	<0.0008	0.0015	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<0.01	-	<0.01	-	<0.1	<0.02	<0.02	<0.02	<0.01	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	0.01	<0.02	0.02	<0.02	<0.1	<0.02	0.04	0.03	0.03	<0.05
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<0.0008	<0.0008	0.0023	<0.0008	<0.004	<0.0008	<0.0008	<0.0008	<0.0008	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	0.0027	<0.0005	0.0067	<0.0005	<0.002	0.0046	0.0274	0.0061	0.0106	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	0.0034	<0.0005	0.0076	<0.0005	<0.002	0.0046	0.0379	0.0058	0.0107	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.05
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<0.01	-	0.05	-	<0.1	<0.02	0.02	<0.02	0.01	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	0.02	-	<0.01	-	-	-	-	-	<0.01	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	0.02	-	<0.01	-	<0.1	<0.02	0.04	0.03	0.01	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	0.02	-	<0.01	-	<0.1	<0.02	0.04	0.04	<0.01	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	0.02	-	<0.01	-	<0.1	<0.02	0.04	0.03	0.02	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<0.01	<0.01	0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	0.09
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05

	Per and polyfluoroalkyl substances																
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.01
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	0.008	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	0.009	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	-	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0016	<0.0006
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0017	<0.0007
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoronanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.01
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	0.0047	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	-	0.0048	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	0.0381	0.009	<0.0016	<0.0016	<0.0016	<0.0040	0.0066
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	-	0.0464	0.0139	<0.0016	<0.0016	<0.0016	<0.0040	0.0093
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	0.0472	0.0102	<0.0016	<0.0016	<0.0016	<0.0040	0.0064
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	-	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	<0.001	<0.001	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	<0.005	-	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<0.005	-	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0022	<0.0009
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0022	<0.0009
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0022	<0.0009
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0018	<0.0007
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0022	<0.0009
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0022	<0.0009
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	0.016	0.0106	<0.0016	<0.0016	<0.0016	<0.0040	0.0086
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	0.0115	0.0062	<0.0016	<0.0016	<0.0016	<0.0040	0.0059
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
500				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	0.0175	0.0059	<0.0008	<0.0008	<0.0008	<0.0019	0.0182
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<0.005	-	-	0.021	0.011	<0.002	<0.002	<0.002	<0.005	0.01
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	0.007	0.0075	<0.0008	<0.0008	<0.0008	<0.0019	0.0104
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0019	<0.0008
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.01
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	0.002	0.003	<0.002	<0.005	<0.01	<0.05	<0.01
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTeDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.005	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.01
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0020	<0.0008
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0020	<0.0008
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	0.0019	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	0.0017	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	0.0005
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesu lfonamidoethanol (NEtFOSE)	N-ethyl- perfluorooctanesulfona midoacetic acid (NEtFOSAA)	N- methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N- Methylperfluorooctane sulfonamidoethanol (N- MeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	<0.05	<0.05
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	-	-	-	-	-	-	<0.05	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	<0.02	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	<0.05	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N- ethylperfluorooctanesu lfonamidoethanol (NEtFOSE)	N-ethyl- perfluorooctanesulfona midoacetic acid (NEtFOSAA)	N- methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N- Methylperfluorooctane sulfonamidoethanol (N- MeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.01	<0.05	<0.002	<0.002	<0.005	-	<0.001	-	<0.0004	<0.002
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<0.12	<0.12	<0.05	<0.05	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<0.12	<0.12	<0.05	<0.05	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethylperfluorooctane sulfonamide (NEtFOSA)	N-Ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-Methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamide (NMeFOSA)	N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	0.76	<0.05	<0.05
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	0.18	<0.05	<0.05
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	<0.001	-	<0.001	<0.001
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<0.002	<0.002	<0.0006	<0.0006	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	0.002	<0.001	<0.001
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	0.002	<0.001	<0.001
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<0.12	<0.12	<0.05	<0.05	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NETFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NETFOSE)	N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																					
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1											
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<0.01	<0.05	<0.002	<0.002	<0.005	-	<0.001	-	<0.0004	<0.002	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001	
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	-	<0.01	<0.01	
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	-	<0.01	<0.01	
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05	
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-			

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethylperfluorooctanesulfonamide (NEtFOSA)	N-Ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-Methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamide (NMeFOSA)	N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																					
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1											
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-								

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-Ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Methylperfluorooctane sulfonamidoethanol (NMeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	-	-	-	-	<0.05	0.11	<0.05	<0.05
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	-	-	-	-	<0.05	0.08	<0.05	<0.05
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	-	-	-	-	<0.05	0.08	<0.05	<0.05
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-</				

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																					
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1											
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	0.016	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<0.002	<0.002	<0.0009	<0.0009	<0.002	<0.002	<0.001	0.004	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	<0.002	<0.002	<0.0009	<0.0009	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<0.002	<0.002	<0.0009	<0.0009	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<0.002	<0.002	<0.0007	<0.0007	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<0.002	<0.002	<0.0009	<0.0009	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<0.002	<0.002	<0.0009	<0.0009	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000																

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethylperfluorooctanesulfonamide (NEtFOSA)	N-Ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-Methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamide (NMeFOSA)	N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																					
PFAS NEMP 2020 Freshwater 99%																					
WSA SBT - EPL 21672 (amended 10 May 2023)										1											
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	<0.002	<0.002	<0.0008	0.002	<0.002	<0.002	<0.001	0.061	0.002	<0.001	
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.005	0.084	<0.005	<0.005	
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	0.062	0.002	<0.001	
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	<0.05	0.05	<0.05	<0.05	
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.006	<0.001	<0.001	
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.005	<0.001	<0.001	
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	0.01	<0.001	<0.001	
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	0.005	<0.001	<0.001	
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<0.12	<0.12	<0.05	<0.05	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05	
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-	
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-													

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesu lfonamidoethanol (NEtFOSE)	N-ethyl- perfluorooctanesulfona midoacetic acid (NEtFOSAA)	N- methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N- Methylperfluorooctane sulfonamidoethanol (N- MeFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<0.01	<0.05	<0.002	<0.002	<0.005	-	<0.001	-	<0.0004	<0.002
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.004	<0.001	<0.001
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.001	-	<0.001	<0.001
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.004	<0.001	<0.001
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	0.01	<0.001	<0.001
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	<0.002	<0.002	<0.0008	<0.0008	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.003	<0.001	<0.001
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	-	<0.05	<0.05
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	<0.05	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	-	<0.01	<0.01
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	-	<0.01	<0.01
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	-	<0.01	<0.01

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Pesticides				
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
EQL	500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	0.08	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	0.08	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	0.13	0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	0.09	0.03	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	0.07	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<0.01	<0.01	-	<0.01	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	0.01	0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<0.01	<0.01	-	<0.01	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	<0.01	-	<0.01	<0.01	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<0.01	<0.01	-	<0.01	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	0.02	0.02	-	<2	<2	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	<0.01	<0.01	<0.01	-	-	-	-	-
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	<0.01	<0.01	<0.01	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	0.012	-	0.023	0.1	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	0.0121	0.0851	0.0281	0.1011	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	0.016	0.105	0.036	0.123	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	<0.01	<0.01	<0.01	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	-	-	0.11	0.08	0.11	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	-	-	<0.05	<0.05	<0.05	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	<0.05	<0.05	<0.05	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	0.76	<0.01	-	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	-	-	0.26	0.03	-	<2	<2	<0.5	<0.5	-
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	<0.005	<0.001	<0.005	-	-	-	-	-
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	-	-	<0.01	<0.01	<0.01	-	-	<0.5	<0.5	-
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	<0.0006	<0.0006	<0.0006	<2	<2	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	-	-	<0.5	<0.5	-
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<0.001	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	0.002	<0.0007	0.002	<2	<2	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	0.002	<0.0007	0.002	<2	<2	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	-	-	<0.05	<0.05	<0.05	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	<0.001	0.0065	<0.001	0.0065	-	-	-	-	-
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	0.0021	-	0.0022	0.034	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	<0.001	0.0134	<0.001	0.0134	-	-	-	-	-
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	<0.001	0.0144	<0.001	0.0144	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	0.0073	<0.001	0.0073	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	<0.001	0.0073	<0.001	0.0073	-	-	-	-	-
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	-	-	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<0.01	<0.01	0.12	<0.01	0.12	-	-	-	-	-
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<0.01	<0.01	<0.05	<0.01	<0.1	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	<0.01	<0.01	<0.01	-	-	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.05	<0.01	<0.1	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	0.14	<0.01	0.14	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<0.01	<0.01	<0.1	<0.01	<0.1	-	-	-	-	-
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	0.0381	0.0151	0.0423	<2	<2	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	0.0364	0.0176	0.0394	<2	<2	-	-	-
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	0.297	0.0281	0.341	<2	<2	-	-	-
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	0.213	0.0421	0.248	<2	<2	-	-	-
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	0.27	0.0566	0.327	<2	<2	-	-	-
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	0.152	0.0552	0.163	<2	<2	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	0.157	0.0559	0.168	<2	<2	-	-	-
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	0.99	0.89	1.05	<2	<2	-	-	-
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	1.06	0.958	1.14	<2	<2	-	-	-
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	0.986	0.85	1.06	<2	<2	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	1.12	1.07	1.16	<2	<2	-	-	-
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	1.043	1.037	1.078	1.006	1.12	-	-	-	-	-
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	-	-	0.86	0.84	-	<2	<2	<0.5	<0.5	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	-	-	0.75	0.73	-	<2	<2	<0.5	<0.5	-
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	0.95	0.93	-	<2	<2	<0.5	<0.5	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	0.83	0.81	-	<2	<2	<0.5	<0.5	-
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	-	-	0.66	0.64	-	<2	<2	<0.5	<0.5	-
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	0.75	0.73	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	<0.002	<0.002	<0.002	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	0.0301	0.0059	0.034	<2	<2	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	0.0288	0.006	0.0327	<2	<2	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	0.0313	0.0062	0.0355	<2	<2	-	-	-
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	-	-	0.01	0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	-	-	0.01	0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	0.002	<0.0008	0.002	<2	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	<0.002	<0.002	<0.002	<2	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	<0.0008	<0.0008	<0.0008	<2	<2	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<0.01	<0.01	-	<0.01	-	-	-	-	-	-
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	-	-	0.11	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	-	-	0.08	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	-	-	0.08	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	0.032	0.0081	0.032	<2	<2	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	0.0044	0.0016	0.0044	<2	<2	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	0.0045	0.0016	0.0045	<2	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	0.0124	<0.0009	0.0124	<2	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	0.0022	<0.0009	0.0022	<2	<2	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	0.0017	<0.0009	0.0017	<2	<2	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	0.0102	0.0071	0.0102	<2	<2	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	0.008	0.0052	0.008	<2	<2	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	0.0048	0.002	0.0048	<2	<2	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	0.006	0.003	0.006	<2	<2	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	0.0166	0.0023	0.0189	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	0.0202	0.0027	0.0228	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	0.616	0.441	0.651	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	0.424	0.303	0.45	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	0.37	0.34	0.37	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	0.15	0.13	0.15	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	0.26	0.24	0.26	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	0.1	0.07	0.1	<2	<2	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	0.1	0.07	0.1	<2	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	0.0066	0.0011	0.0066	<2	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	<0.0008	<0.0008	<0.0008	<2	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	<0.0008	<0.0008	<0.0008	<2	<2	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	2.14	0.242	2.2	<2	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	2.34	0.275	2.38	<2	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	2.26	0.264	2.3	<2	<2	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	1.77	0.2	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	0.92	0.17	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	0.0142	0.0016	0.0142	<2	<2	-	-	-
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	0.0113	0.0023	0.0113	<2	<2	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	0.0013	0.0013	0.0083	0.0013	0.0083	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	0.0028	0.0016	0.0028	<2	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	0.0661	0.0116	0.0765	<2	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	0.0103	0.0029	0.0103	<2	<2	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	0.0088	0.0012	0.0088	<2	<2	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	<0.05	<0.05	<0.05	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	0.0008	-	0.0005	0.0086	-	-	-	-	-	-
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	0.0119	0.0129	<0.001	0.0149	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	0.013	0.015	0.001	0.019	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	0.017	-	0.0029	0.029	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFAS (WA DER List)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	0.001	0.001	0.0003	0.0003	0.0003	2	2	0.5	0.5	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	0.0009	-	0.001	0.0041	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	0.0012	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	0.0141	<0.0003	0.0141	<2	<2	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	<0.001	<0.005	<0.001	<0.005	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	0.0152	0.0014	0.0152	<2	<2	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	<2	<2	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	0.003	0.003	0.018	<0.001	0.018	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	0.0029	0.0059	0.0019	0.0059	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	<0.001	0.0312	<0.001	0.0312	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	0.0681	0.0019	0.0681	<2	<2	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	0.0207	0.0067	0.0207	<2	<2	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	<0.01	<0.01	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	0.13	0.03	0.13	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	0.0033	0.0023	0.0033	<2	<2	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	0.0601	0.0094	0.0634	<2	<2	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	0.073	0.011	0.0761	<2	<2	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	<0.01	<0.01	<0.01	<2	<2	<0.5	<0.5	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	0.08	0.05	-	<2	<2	<0.5	<0.5	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	0.02	<0.01	-	0.02	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	0.19	0.02	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	0.2	0.02	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	0.2	0.02	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.1
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	<2
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	<0.01	<0.05	<0.01	<0.1	-	-	-	-	-
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	0.01	0.1	0.01	0.1	-	-	-	-	-
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	<0.01	<0.05	<0.01	<0.1	-	-	-	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Phthalates						Methyl Ethyl Ketone
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<1
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	<2	<20	-	<5	<5	<5	<5	<5	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<50
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<2	<20	-	<5	<5	<5	<5	<5	<50
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	<2	<50
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	<1
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	<20	<5	<5	<5	<5	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	<10	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<1	<10	-	-	-	-	-	<2	<50
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	<2	<20	-	<5	<5	<5	<5	<5	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	-	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	-	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	-	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	<2.0	-	<0.5	<10	<2	<2	<2	<2	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	<2	<20	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<1	<10	-	-	-	-	-	-	<2	<50
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	-	<10	-	<5	<5	<5	<5	12	<2	<50
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	<2	<10	<2	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	<20	-	<20	<2	<2	<2	<2	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	<0.004	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	<10	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	<10	-	-	-	-	-	-	-	<50
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	<2	-	<0.5	<10	<2	<2	<2	<2	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	18
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	<1
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<50
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<1
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<50
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<2.0	-	<0.5	10	<2	<2	<2	<2	-	<50
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	<2	<50
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	<50
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	<2	<10	<2	<2	<2	<2	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	-	-	-	-	-	-	-	-	<2	70
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	<2	60
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	-	-	-	-	-	-	-	-	<2	80
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<2	-	<0.5	-	-	-	-	-	<2	<50
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	<50
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	<2
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<2	-	<0.5	-	-	-	-	-	<2	<50
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	-	-	-	<5	<5	<5	<5	<5	<2	<50
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	<50
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	-	-	<2	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	80
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	-	-	-	-	-	-	-	-	<2	70
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	-	-	-	-	-	<5	380
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	-	<20	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	-	<20	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	-	<10	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	-	<20	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	<20	-	-	-	-	-	-	-	<1
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	<5	<1
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	<1	<10	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	-	<10	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	-	<20	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	80
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	60
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	<20	-	-	<5	<5	<5	<5	<5	<5
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	50
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	-	-	<0.5	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	<20	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	<50
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	70
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<2	80
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	-	-	<0.5	-	<2	<2	<2	<2	<2	150
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	110
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	-	-	-	<10	<10	<10	<10	<10	<2	<50
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	<50
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	-	-	-	-	-	-	-	-	<2	90
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<100
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<100
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<100
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<100
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<100
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<100
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<100
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<2	<20	-	<5	<5	<5	<5	<5	<2	<50
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<500
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<500
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<1
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<500
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<500
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<500
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<500
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<200
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<500
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	<1
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	<1
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	<1
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	<1
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	<1
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	<5	<5	<5	<5	<5	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	-	-	<2	<10	<2	<2	<2	<2	<2	<100
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	<10	<5
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<2	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl ketone
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	20	0.5	5	2	2	2	2	2	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		0.004					1,000	3,700	26		
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<1	<10	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<2	<20	-	-	-	-	-	-	-	<50
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<1	<10	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	<2	<20	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	<1	<10	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	<2	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	<0.5	-	<2	<2	<2	<2	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	<2.0	-	<0.5	<10	<2	<2	<2	<2	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	<2	<20	-	<5	<5	<5	<5	<5	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	<0.1	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	<0.5	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	<2	<50
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<10	-	-	-	-	-	-	-	<1

	Solvents																2-(acetylamino) fluorene
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<1	<1	<1	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	<1	<1	<1	<1	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<50	<5	-	-	<50	-	<2	<50	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<50	<5	-	-	<50	-	<2	<50	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	<1	<1	<1	2	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	<50	-	<2	<50	<2
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	<1	<1	<1	<1	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<50	<5	-	-	<50	-	<2	<50	<2
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	<50	9	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	<50	<5	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<50	<5	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	<1	<1	<1	2	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<50	<5	-	-	-	<50	-	-	<50	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	<1	<1	<1	2	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	<1	<1	<1	2	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	<5	<1	<1	<5	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	<1	<1	<1	<1	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	<1	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	<1	<1	<1	<1	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	-	<50	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	<1	<1	<1	<1	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	<5	<1	<1	<5	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	<1	<1	<1	2	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	-	<50	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	-	<50	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	-	<50	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	<1	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<50	<5	-	-	-	<50	-	-	<50	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	-	<50	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	<2	<2	<2	<2	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	<50	<5	-	-	-	<50	-	-	<50	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	<2	<2	<2	<2	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	<5	<1	<1	97	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	<1	<1	<1	<1	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	<1	<1	<1	<1	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<50	18	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<5	<1	<1	<5	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<50	21	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	-	<50	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<50	11	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	<1	<1	<1	2	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<50	13	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	<5	1	<1	<5	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<50	18	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<50	11	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<50	15	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	<200	<20	-	-	-	<200	-	<2	<200	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	<500	<50	-	-	-	<500	-	<2	<500	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	<1	<1	<1	<1	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	<1	<1	<1	<1	<3	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	<3	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	<1	<1	<1	<5	<0.5	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	<1	<1	<1	<1	<0.05	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	<3	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	<3	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	<1	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	<1	<1	<1	<1	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	<1	<1	<1	<1	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<100	<10	-	-	-	<100	-	<2	<100	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	4-Methyl-2-pentanone	Carbon disulfide	Allyl chloride	Acetone	Propane Nitrile (Propionitrile)	2-hexanone (MBK)	Cyclohexane	Isophorone	Vinyl acetate	2-(acetylamino) fluorene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5	1	1	5		50		2	50	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<50	<5	-	-	-	<50	-	-	<50	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<5	<1	<1	<5	-	-	-	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<50	<5	-	-	-	<50	-	<2	<50	<2
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	<1	<1	<1	<1	-	-	-	-	-	-

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	SVOC				
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2												
AS2159 – 2009 Piling – Design and Installation																		
PFAS NEMP 2020 Freshwater 99%																		
WSA SBT - EPL 21672 (amended 10 May 2023)							1											

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	<5	<5	<5	-	-	<5	<5	-	<5
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	-	<2	<2	<2
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<2	<2	<2	<2	<2	-	<2	<2	<2
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	-	<2	<2	<2
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	<5	<5	<5	<5	-	-	<5	<5	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	<5	<5	<5	<5	-	-	<5	<5	-	<5
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	<5	<2	<2	<2	-	-	<2	<2	-	<2
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	<10	<10	<10	<10	-	-	<10	<10	-	<10
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<5	<5	<5	<5	-	-	<5	<5	-	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Dibenzofuran
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	2	2	5	2	2	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	<5	<5	<5	<5	-	-	<5	<5	-	<5
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<2	<2	-	<2	<2	<2
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

														Volatile Organic Compounds			
	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyriline	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																	
PFAS NEMP 2020 Freshwater 99%																	
WSA SBT - EPL 21672 (amended 10 May 2023)							1										

Monitoring Zone	Location Code	Field ID	Date																
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-	-	<5	-	-	<5	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<4	<2	<2	-	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<2	<2	<2	<2	<4	<2	<2	-	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<2	<2	<2	<2	<4	<2	<2	-	<5
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-	-	-	-	-	-	-	-	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	<2	<2	<2	<2	<4	<2	<2	-	<5
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	<2	<2	<2	<2	<4	<2	<2	-	<5
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<2	<2	<2	<2	<4	<2	<2	-	<5
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	-	-	-	-	-	-	-	-	<5	<5
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	<5	-	-	<5	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	<5
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-	-	-	<5	-	-	<5	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	<5
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	<5
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	-	-	-	-	-	-	-	-	<5	<5
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-	-	-	<5	-	-	-	<5	-	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-	-	-	<5	-	-	-	<5	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-	-	-	<5	-	-	-	<5	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-	-	-	<5	-	-	-	<5	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	<5	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<2	<2	2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrlene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	<5	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<20	<20
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<50	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012	SBT-GW-1012C	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT_GW_1013_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
EQL				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<2	<2	<2	<2	<4	<2	<2	-	<10	<10
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-	-	-	<10	-	-	-	<5	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	<5	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Hexachloropropene	Methapyrene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	1,3,5-Trinitrobenzene	Dibenz(a,j)acridine	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	2	2	2	2	4	2	2	5	5	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2											
AS2159 – 2009 Piling – Design and Installation																				
PFAS NEMP 2020 Freshwater 99%																				
WSA SBT - EPL 21672 (amended 10 May 2023)										1										
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	-	-	-	-	-	-	-	-	<5	<5
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-	-	-	<5	-	-	<5	-	-	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<2	<2	<2	<2	<4	<2	<2	-	<5	<5
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation								
PFAS NEMP 2020 Freshwater 99%								
WSA SBT - EPL 21672 (amended 10 May 2023)							1	

Monitoring Zone	Location Code	Field ID	Date								
Claremont Meadows	GW-1028	GW-1028	23 Jun 2023	-	1,020,000	-	<1	-	<0.1	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030_211222	21 Dec 2022	-	1,640,000	-	<10	-	<1.0	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	01 Feb 2023	-	1,600,000	-	<10	-	<1.0	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	1,610,000	-	<10	-	1	-	-
Claremont Meadows	SBT-CM-1030	SBT-CM-1030	09 Feb 2023	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	168,000	-	<1	-	0.2	-	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	162,000	-	<1	-	0.2	-	-
Claremont Meadows	SBT-GW-1024	QC8_071222_JF	07 Dec 2022	180,000	-	13	5	0.4	<0.2	15	-
Claremont Meadows	SBT-GW-1024	QC7_071222_SF	07 Dec 2022	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024_071222	07 Dec 2022	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	SBT-GW-1024	17 Jan 2023	-	160,000	-	<1	-	0.2	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031_011222	01 Dec 2022	-	626,000	-	2	-	<0.1	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	15 Dec 2022	-	723,000	-	<10	-	<1.0	-	<5
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	17 Jan 2023	-	68,000	-	<1	-	<0.1	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	38,000	-	<1	-	<0.1	-	-
Claremont Meadows	SBT-GW-1031	SBT-GW-1031	09 Feb 2023	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	QC29_230523_KT	23 May 2023	-	62,000	-	<1	-	<0.1	-	-
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 May 2023	-	61,000	-	<1	-	<0.1	-	-
Claremont Meadows	SBT-GW-1805	QC30-230523-KT	23 May 2023	96,000	-	34	<1	1	<0.2	93	<5
Claremont Meadows	SBT-GW-1805	SBT-GW-1805	23 Jun 2023	-	64,000	-	<1	-	<0.1	-	-
Claremont Meadows	SMGW-BH-A109		26 May 2020	-	320,000	1	1	<0.1	<0.1	25	-
Claremont Meadows	SMGW-BH-A109		30 Jun 2020	-	372,000	<1	2	<0.1	<0.1	1	-
Claremont Meadows	SMGW-BH-A109		25 Aug 2020	-	395,000	2	<1	<0.1	<0.1	2	-
Claremont Meadows	SMGW-BH-A109		17 Feb 2021	-	379,000	2	<1	<0.1	<0.1	3	-
Claremont Meadows	SMGW-BH-A109S		26 May 2020	-	4,000	2	2	<0.1	<0.1	2	-
Claremont Meadows	SMGW-BH-A109S		30 Jun 2020	-	9,000	2	1	<0.1	<0.1	1	-
Claremont Meadows	SMGW-BH-A109S		25 Aug 2020	-	20,000	<1	<1	<0.1	<0.1	<1	<5
Claremont Meadows	SMGW-BH-A109S		17 Feb 2021	-	11,000	4	3	0.1	<0.1	3	-
Claremont Meadows	SMGW-BH-A304	BH-A304-120221	12 Feb 2021	470,000	-	16	17	<0.2	<0.2	2	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	12	11	<0.1	<0.1	<1	-
Claremont Meadows	SMGW-BH-A304		12 Feb 2021	-	-	16	12	<0.2	<0.2	2	-
Claremont Meadows	SMGW-BH-A304		17 Feb 2021	-	-	-	-	-	-	-	-
Claremont Meadows	SMGW-BH-A304		16 Mar 2021	-	-	14	-	<0.2	-	<1	-
Claremont Meadows	SMGW-BH-A304	BH-A304-160321	16 Mar 2021	-	-	14	-	<0.2	-	<1	<5
Luddenham Road	BH207	BH207_301122	30 Nov 2022	-	70,000	-	<1	-	<0.1	-	-
Luddenham Road	BH207	QC3_301122-JP	30 Nov 2022	-	88,000	-	<1	-	<0.1	-	-
Luddenham Road	BH207	QC34-301122-JP	30 Nov 2022	90,000	-	10	<1	<0.2	<0.2	11	-
Luddenham Road	BH207	BH207	18 Jan 2023	-	172,000	-	<1	-	<0.1	-	-
Luddenham Road	BH209	BH209_301122	30 Nov 2022	-	487,000	-	<1	-	<0.1	-	-
Luddenham Road	BH209	BH209	18 Jan 2023	-	460,000	-	<1	-	0.1	-	-
Luddenham Road	SMGW-BH-B106		30 Jun 2020	-	961,000	<1	2	0.4	0.4	3	<5
Luddenham Road	SMGW-BH-B106		31 Jul 2020	-	729,000	<1	<1	0.8	0.7	2	-
Luddenham Road	SMGW-BH-B106		26 Aug 2020	-	892,000	1	<1	0.4	0.4	4	<5
Luddenham Road	SMGW-BH-B106		15 Feb 2021	-	1,000,000	1	<1	0.5	0.3	4	-
Luddenham Road	SMGW-BH-B109		30 Jun 2020	-	790,000	3	2	0.1	<0.1	8	-
Luddenham Road	SMGW-BH-B109		26 Aug 2020	-	690,000	1	<1	0.2	0.1	3	<5
Luddenham Road	SMGW-BH-B109		22 Feb 2021	-	790,000	<1	1	<0.1	0.2	<1	-
Luddenham Road	SMGW-BH-B120		26 Aug 2020	-	1,070,000	3	2	0.2	<0.1	2	-
Luddenham Road	SMGW-BH-B120		23 Feb 2021	-	732,000	1	<1	0.4	<0.1	<1	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	28 Feb 2023	-	34,000	-	1	-	<0.1	-	-
Luddenham Road	SMGW-BH-B120	DUP01	18 Apr 2023	-	687,000	3	2	<0.1	0.1	29	-
Luddenham Road	SMGW-BH-B120	TRIP01	18 Apr 2023	-	99,000	5	2	0.2	<0.1	11	-
Luddenham Road	SMGW-BH-B120	SMGW-BH-B120	18 Apr 2023	-	59,000	4	2	0.2	<0.1	11	-
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123_160123	16 Jan 2023	-	1,030,000	-	<1	-	<0.1	-	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
Luddenham Road	SMGW-BH-B123	SMGW-BH-B123	22 Feb 2023	-	943,000	-	3	-	<0.1	-	-
Luddenham Road	SMGW-BH-B123	SMGW_BH_B123	16 Mar 2023	-	1,050,000	-	<10	-	<1.0	-	<5
Luddenham Road	SMGW-BH-B130	FD02A	30 Jun 2020	-	991,000	4	4	<0.1	<0.1	<1	-
Luddenham Road	SMGW-BH-B130		30 Jun 2020	-	544,000	4	2	<0.1	<0.1	2	-
Luddenham Road	SMGW-BH-B130		30 Jul 2020	-	921,000	3	2	<0.1	<0.1	7	-
Luddenham Road	SMGW-BH-B130	FD01C	26 Aug 2020	-	886,000	3	<1	<0.1	<0.1	<1	-
Luddenham Road	SMGW-BH-B130		26 Aug 2020	-	889,000	2	<1	<0.1	<0.1	<1	<5
Luddenham Road	SMGW-BH-B130		17 Feb 2021	-	661,000	2	1	0.2	<0.1	2	-
Luddenham Road	SMGW-BH-B130	FD02C	17 Feb 2021	-	752,000	2	1	0.2	<0.1	2	-
Luddenham Road	SMGW-BH-B308		02 Mar 2021	-	153,000	2	2	<0.1	<0.1	2	<5
Luddenham Road	SMGW-BH-B309		02 Mar 2021	-	46,000	<1	1	<0.1	<0.1	2	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	720,000	-	7	8	0.5	0.5	6	-
Luddenham Road	SMGW-BH-B312		12 Feb 2021	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312		17 Feb 2021	-	-	-	-	-	-	-	-
Luddenham Road	SMGW-BH-B312	BH-B312-160321	16 Mar 2021	-	-	2	-	0.3	-	<1	<5
Luddenham Road	SMGW-BH-B313		10 May 2021	1,400,000	-	3	2	-	-	-	<5
Luddenham Road	SMGW-BH-B319		02 Mar 2021	-	1,420,000	2	1	1.4	1.4	1	-
Luddenham Road	SMGW-BH-B319		26 May 2021	-	1,340,000	1	<1	0.1	<0.1	1	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	28 Feb 2023	-	942,000	-	1	-	0.3	-	-
Luddenham Road	SMGW-BH-B319	SMGW-BH-B319	18 Apr 2023	-	732,000	<1	2	0.4	0.1	1	-
Luddenham Road	SMGW-BH-B320		15 Apr 2021	800,000	-	3	2	<0.2	<0.2	1	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	-	100,000	<1	<1	0.1	<0.1	3	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	1	-
Luddenham Road	SMGW-BH-B325		27 Apr 2021	110,000	-	<1	<1	<0.2	<0.2	2	<5
Northern Tunnels	SBT-BH-1023	SBT-BH 1023	04 Oct 2022	-	-	6	-	0.6	-	65	-
Northern Tunnels	SMGW-BH-A011-1		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A011S	A011S	05 Sep 2019	-	69,000	-	1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A011S		06 Sep 2019	69,000	-	1	1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A011S		18 Dec 2019	68,000	-	<1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A011S		20 Jan 2020	69,000	-	2	1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A011S		20 Apr 2020	109,000	-	2	2	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A011S		27 Aug 2020	-	64,000	4	4	<0.1	<0.1	3	-
Northern Tunnels	SMGW-BH-A011S	FD01B	27 Aug 2020	-	57,000	6	4	<0.1	<0.1	3	-
Northern Tunnels	SMGW-BH-A012		05 Sep 2019	94,000	-	<1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A012	A012	05 Sep 2019	-	94,000	-	<1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	1,000	1,000	<1	<1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A019	BH-A019	06 Sep 2019	-	-	-	-	-	-	-	-
Northern Tunnels	SMGW-BH-A019A		30 Jul 2020	-	588,000	12	7	0.1	<0.1	15	-
Northern Tunnels	SMGW-BH-A019A		07 Aug 2020	-	-	-	-	-	-	-	<5
Northern Tunnels	SMGW-BH-A019A		25 Aug 2020	-	570,000	11	9	<0.1	<0.1	3	-
Northern Tunnels	SMGW-BH-A019A		07 Oct 2020	-	539,000	3	3	<0.1	<0.1	7	-
Northern Tunnels	SMGW-BH-A019A		27 Nov 2020	-	506,000	6	2	<0.1	<0.1	13	<5
Northern Tunnels	SMGW-BH-A105		26 May 2020	-	170,000	2	2	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A105		01 Jul 2020	-	156,000	3	2	<0.1	<0.1	1	<5
Northern Tunnels	SMGW-BH-A105		25 Aug 2020	-	166,000	2	2	<0.1	<0.1	2	<5
Northern Tunnels	SMGW-BH-A105		16 Feb 2021	-	174,000	1	1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A105S		26 May 2020	-	36,000	2	1	<0.1	<0.1	3	-
Northern Tunnels	SMGW-BH-A105S		25 Aug 2020	-	36,000	2	<1	<0.1	<0.1	2	-
Northern Tunnels	SMGW-BH-A105S		16 Feb 2021	-	28,000	1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A107		26 May 2020	-	388,000	3	3	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A107		29 Jun 2020	-	363,000	2	3	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A107		25 Aug 2020	-	298,000	4	2	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A107		16 Feb 2021	-	367,000	4	2	-	-	-	<5
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107_011222	01 Dec 2022	-	5,000	-	<1	-	<0.1	-	-
Northern Tunnels	SMGW-BH-A107	SMGW-BH-A107	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A107S		27 May 2020	-	196,000	<1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A107S		29 Jun 2020	-	190,000	<1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A107S	FD04	27 Aug 2020	-	175,000	<1	<1	<0.1	<0.1	1	-
Northern Tunnels	SMGW-BH-A107S		27 Aug 2020	-	182,000	<1	<1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A107S		15 Feb 2021	-	228,000	<1	<1	<0.1	<0.1	<1	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
Northern Tunnels	SMGW-BH-A111		30 Jun 2020	-	522,000	3	3	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A111		30 Jul 2020	-	493,000	2	2	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A111		20 Aug 2020	-	502,000	2	1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A111		17 Feb 2021	-	605,000	1	<1	<0.1	<0.1	<1	-
Northern Tunnels	SMGW-BH-A121		30 Jun 2020	-	1,090,000	1	2	<0.1	<0.1	2	<5
Northern Tunnels	SMGW-BH-A121		30 Jul 2020	-	334,000	<1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A121		20 Aug 2020	-	260,000	2	2	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A121		17 Feb 2021	-	94,000	1	<1	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A122		26 May 2020	-	2,000	<1	<1	0.2	0.1	142	-
Northern Tunnels	SMGW-BH-A122		30 Jun 2020	-	<1,000	-	-	-	-	-	<5
Northern Tunnels	SMGW-BH-A122		20 Aug 2020	-	<1,000	-	-	-	-	-	<5
Northern Tunnels	SMGW-BH-A122		17 Feb 2021	-	2,000	1	<1	<0.1	<0.1	20	-
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	20 Jan 2023	-	7,000	-	<1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A122	SMGW-BH-A122	22 Feb 2023	-	6,000	-	<1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A122	SMGW_BH_A122	16 Mar 2023	-	7,000	-	<1	-	<0.1	-	<5
Northern Tunnels	SMGW-BH-A123		28 May 2020	-	493,000	2	2	<0.1	<0.1	2	-
Northern Tunnels	SMGW-BH-A123		01 Jul 2020	-	403,000	4	2	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A123		30 Jul 2020	-	402,000	3	2	<0.1	<0.1	1	<5
Northern Tunnels	SMGW-BH-A123		20 Aug 2020	-	371,000	2	2	<0.1	<0.1	<1	<5
Northern Tunnels	SMGW-BH-A123		17 Feb 2021	-	456,000	2	1	0.1	<0.1	2	<5
Orchard Hills	BH-A372	BH-A372	04 Aug 2022	-	-	4	-	<0.1	-	1	-
Orchard Hills	BH-A372-s	BH-A372-s	04 Aug 2022	-	-	-	<1	-	<0.1	-	<5
Orchard Hills	BH-B303S	BH-13303S-180221	18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<5
Orchard Hills	BH-B303S	BH-13303S-150321	15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037_231122	23 Nov 2022	-	210,000	-	1	-	<0.1	-	<5
Orchard Hills	SBT-GW-1037	SBT-GW-1037	13 Dec 2022	-	207,000	-	<1	-	0.2	-	-
Orchard Hills	SBT-GW-1037	SBT-GW-1037	17 Jan 2023	-	362,000	-	<1	-	<0.1	-	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042	04 Aug 2022	-	-	-	<1	-	0.1	-	<5
Orchard Hills	SBT-GW-1042	SBT-GW-1042_231122	23 Nov 2022	-	205,000	-	<1	-	0.2	-	-
Orchard Hills	SBT-GW-1042	SBT-GW-1042	13 Dec 2022	-	205,000	-	2	-	0.2	-	-
Orchard Hills	SBT-GW-1043	SBT-GW-1043_291122	29 Nov 2022	-	216,000	-	<1	-	0.5	-	-
Orchard Hills	SBT-GW-1043	QC10-131222-TX	13 Dec 2022	180,000	-	-	<1	-	0.7	-	<5
Orchard Hills	SBT-GW-1043	SBT-GW-1043	13 Dec 2022	-	198,000	-	<1	-	0.7	-	<5
Orchard Hills	SBT-GW-1043	QC9-131222_TX	13 Dec 2022	-	181,000	-	1	-	0.6	-	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048	15 Sep 2022	-	-	-	<10	-	2.7	-	<5
Orchard Hills	SBT-GW-1048	SBT_GW_1048	30 Sep 2022	-	1,460,000	-	<10	-	2.8	-	<5
Orchard Hills	SBT-GW-1048	SBT-GW-1048_291122	29 Nov 2022	-	1,350,000	-	<10	-	2.7	-	-
Orchard Hills	SBT-GW-1048	SBT-GW-1048	13 Dec 2022	-	1,410,000	-	<10	-	2.3	-	-
Orchard Hills	SBT-GW-1063	SBT-GW-1063_291122	29 Nov 2022	-	238,000	-	3	-	<0.1	-	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	13 Dec 2022	-	317,000	-	3	-	<0.1	-	<5
Orchard Hills	SBT-GW-1063	SBT-GW-1063	17 Jan 2023	-	478,000	-	4	-	<0.1	-	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	04 May 2023	-	1,000	-	94	-	8.1	-	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	2,000	-	<10	-	<1.0	-	<5
Orchard Hills	SBT-GW-1806	SBT-GW-1806	23 May 2023	-	-	-	-	-	-	-	<5
Orchard Hills	SBT-GW-1807	SB-GW-1807	04 May 2023	-	1,000,000	-	<10	-	<1.0	-	-
Orchard Hills	SBT-GW-1807	SBT-GW-1807	23 May 2023	-	767,000	-	<10	-	<1.0	-	<5
Orchard Hills	SBT-GW-1808	SBT-GW-1808	28 Jul 2023	-	563,000	-	1	-	0.7	-	<5
Orchard Hills	SBT-VWP-1037	SBT-GW-1037	15 Sep 2022	-	-	-	<1	-	<0.1	-	<5
Orchard Hills	SBT-VWP-1037	QC02	30 Sep 2022	220,000	-	-	<1	-	<0.2	-	<5
Orchard Hills	SBT-VWP-1037	SBT_GW_1037	30 Sep 2022	-	246,000	-	<1	-	0.2	-	-
Orchard Hills	SBT-VWP-1037	QC1	30 Sep 2022	-	243,000	-	<1	-	0.3	-	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	-	-	-	-	-	-	<5
Orchard Hills	SMGW-BH-A017		05 Sep 2019	361,000	-	2	2	<0.1	<0.1	<1	<5
Orchard Hills	SMGW-BH-A017	A017	05 Sep 2019	-	631,000	-	2	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A017		18 Dec 2019	665,000	-	4	4	<0.1	<0.1	<1	<5
Orchard Hills	SMGW-BH-A017		20 Jan 2020	681,000	-	3	5	<0.1	<0.1	<1	<5
Orchard Hills	SMGW-BH-A017		20 Apr 2020	35,000	-	1	1	<0.1	<0.1	<1	<5
Orchard Hills	SMGW-BH-A017		25 Aug 2020	-	83,000	3	2	<0.1	<0.1	4	<5
Orchard Hills	SMGW-BH-A113		27 May 2020	-	548,000	<1	<1	<0.1	<0.1	3	<5
Orchard Hills	SMGW-BH-A113		30 Jun 2020	-	553,000	<1	1	<0.1	<0.1	3	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
Orchard Hills	SMGW-BH-A113		30 Jul 2020	-	555,000	<1	2	<0.1	<0.1	2	<5
Orchard Hills	SMGW-BH-A113		25 Aug 2020	-	513,000	<1	<1	<0.1	<0.1	5	<5
Orchard Hills	SMGW-BH-A113		27 Nov 2020	-	545,000	<1	<1	<0.1	<0.1	<1	-
Orchard Hills	SMGW-BH-A113		15 Feb 2021	-	614,000	1	<1	<0.1	<0.1	4	<5
Orchard Hills	SMGW-BH-A117		26 May 2020	-	1,100,000	3	2	<0.1	<0.1	3	<5
Orchard Hills	SMGW-BH-A117		29 Jun 2020	-	1,050,000	4	4	<0.1	<0.1	2	-
Orchard Hills	SMGW-BH-A117		25 Aug 2020	-	990,000	2	2	<0.1	<0.1	2	<5
Orchard Hills	SMGW-BH-A117		17 Feb 2021	-	964,000	4	3	0.2	0.1	1	<5
Orchard Hills	SMGW-BH-A117S		27 May 2020	-	1,270,000	3	3	0.3	0.2	3	-
Orchard Hills	SMGW-BH-A117S		29 Jun 2020	-	1,050,000	3	4	0.3	0.4	1	<5
Orchard Hills	SMGW-BH-A117S		29 Jul 2020	-	1,100,000	3	2	0.3	0.3	2	-
Orchard Hills	SMGW-BH-A117S		27 Aug 2020	-	1,020,000	3	3	0.3	0.2	<1	-
Orchard Hills	SMGW-BH-A117S		23 Feb 2021	-	1,210,000	4	3	0.2	0.3	3	-
Orchard Hills	SMGW-BH-A310		21 Apr 2021	1,100,000	-	-	3	-	-	-	<5
Orchard Hills	SMGW-BH-A310S		26 Apr 2021	1,000,000	-	1	1	-	-	8	<5
Orchard Hills	SMGW-BH-A311		11 May 2021	980,000	-	3	2	<0.2	<0.2	1	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	-	1,500,000	2	1	0.2	-	3	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	1	1	<0.2	-	1	<5
Orchard Hills	SMGW-BH-A315		26 Apr 2021	1,300,000	-	2	1	<0.2	-	1	-
Orchard Hills	SMGW-BH-A315	SMGW-BH-A315_231122	23 Nov 2022	-	871,000	-	2	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A315	SBT-GW-A315	13 Dec 2022	-	755,000	-	1	-	0.1	-	-
Orchard Hills	SMGW-BH-A315S	BH-A315S-160321	16 Mar 2021	1,500,000	-	<1	2	0.2	<0.2	1	-
Orchard Hills	SMGW-BH-A315S		16 Mar 2021	1,500,000	-	<1	2	-	<0.2	1	<5
Orchard Hills	SMGW-BH-A412	SMGW-BH-A412	24 May 2022	-	530,000	-	4	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A412	FD01_2022.05.24	24 May 2022	-	-	-	-	-	-	-	<5
Orchard Hills	SMGW-BH-A412	FS01-2022.05.24	24 May 2022	-	-	5	-	<0.2	-	2	<5
Orchard Hills	SMGW-BH-A412S	SMGW-BH-A412S	24 May 2022	-	102,000	-	<1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A413	SMGW-BH-A413	15 Mar 2022	-	928,000	-	3	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A413	FD01_22.03.15	15 Mar 2022	-	-	-	3	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A413	FT01_22.03.15	15 Mar 2022	-	-	-	4	-	<0.2	-	-
Orchard Hills	SMGW-BH-A413S	SMGW-BH-A413S	15 Mar 2022	-	53,000	-	<1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A415	SWMGW-BH-A415	08 Sep 2022	-	233,000	-	<1	-	<0.1	-	-
Orchard Hills	SMGW-BH-A415S	SMGW-BH-A415S	15 Mar 2022	-	582,000	-	<1	-	0.2	-	<5
Orchard Hills	SMGW-BH-A415S	SMGW BHA415S	27 Apr 2022	-	231,000	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A416	SWMGW-BH-A416	07 Sep 2022	-	70,000	-	<1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A416S	SMGW-BH-A416S	17 Aug 2022	-	202,000	-	<1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A416S	FD01	17 Aug 2022	-	-	2	-	<0.1	-	6	<5
Orchard Hills	SMGW-BH-A416S	FS01	17 Aug 2022	-	-	-	<1	-	<0.2	-	-
Orchard Hills	SMGW-BH-A417	SWMGW-BH-A417	07 Sep 2022	-	14,000	-	1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A417S	FD02	07 Sep 2022	-	181,000	-	<1	-	<0.1	-	<5
Orchard Hills	SMGW-BH-A417S	SMGW-BH-A417S	07 Sep 2022	-	180,000	-	<1	-	<0.1	-	-
Orchard Hills	SMGW-BH-A417S	FS02	07 Sep 2022	-	-	-	<1	-	<0.2	-	<5
Orchard Hills	SMGW-BH-A418	SMGW-BH-A418	14 Mar 2022	-	496,000	-	1	-	0.1	-	<5
Orchard Hills	SMGW-BH-A418	SMGW BHA418	14 Apr 2022	700,000	-	-	-	-	-	-	<5
Orchard Hills	SMGW-BH-A419	SMGW-BH-A419	14 Mar 2022	-	<1,000	-	1	-	<0.1	-	-
Orchard Hills	SMGW-BH-A419	SMGW BHA419	14 Apr 2022	<1,000	-	-	-	-	-	-	<5
St Marys	EMW1	EMW1_5.00-0.0	26 Jul 2022	-	32,000	-	<1	-	<0.1	-	-
St Marys	EMW1	EMW1-3.00-0.0	26 Jul 2022	-	29,000	-	<1	-	<0.1	-	<5
St Marys	EMW1	EMW1_7.00-0.0	26 Jul 2022	-	331,000	-	<1	-	<0.1	-	<5
St Marys	GW01	GW01-S3	29 Jul 2022	-	20,000	-	<1	-	<0.1	-	<5
St Marys	GW01	GW01-6.5	29 Jul 2022	-	97,000	-	<1	-	<0.1	-	<5
St Marys	GW02	GW02-S3	29 Jul 2022	-	104,000	-	<1	-	0.2	-	-
St Marys	GW02	GW02-6.5	29 Jul 2022	-	103,000	-	<1	-	0.2	-	<5
St Marys	GW02	QC7-121222-JP	12 Dec 2022	-	236,000	-	<1	-	<0.1	-	<5
St Marys	MW1	MW1_2.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<5
St Marys	MW1	MW1_4.00-0.0	26 Jul 2022	-	24,000	-	2	-	<0.1	-	<5
St Marys	MW1	MW1_6.00-0.0	26 Jul 2022	-	25,000	-	2	-	<0.1	-	-
St Marys	MW1	26722-D	26 Jul 2022	-	-	-	1	-	<0.1	-	<5
St Marys	MW1	26722-T	26 Jul 2022	-	-	-	2	-	<0.2	-	<5
St Marys	MW1	MW1_D_281122	28 Nov 2022	-	13,000	-	<1	-	<0.1	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
St Marys	MW1	MW1_S_281122	28 Nov 2022	-	20,000	-	<1	-	<0.1	-	<5
St Marys	MW1	MW1_M_281122	28 Nov 2022	-	12,000	-	<1	-	<0.1	-	<5
St Marys	MW1	MW1-D	12 Dec 2022	-	11,000	-	<1	-	<0.1	-	<5
St Marys	MW1	MW1-M	12 Dec 2022	-	14,000	-	<1	-	<0.1	-	<5
St Marys	MW1	MW1-S	12 Dec 2022	-	15,000	-	<1	-	<0.1	-	-
St Marys	SBT-BH-1233	SBT-GW-1233	09 Aug 2022	-	-	-	3	-	0.7	-	-
St Marys	SBT-CM-1020	SBT-CM-1020_3.00_0.0	26 Jul 2022	-	70,000	-	<1	-	0.5	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020_5.00-0.0	26 Jul 2022	-	69,000	-	<1	-	0.4	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020_7.00-0.0	26 Jul 2022	-	76,000	-	<1	-	0.4	-	<5
St Marys	SBT-CM-1020	SBT_CM_1020_M_281122	28 Nov 2022	-	36,000	-	<1	-	0.1	-	<5
St Marys	SBT-CM-1020	SBT_CM_1020_S_281122	28 Nov 2022	-	40,000	-	<1	-	0.1	-	<5
St Marys	SBT-CM-1020	SBT_CM_1020_D_281122	28 Nov 2022	-	42,000	-	4	-	<0.1	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020S_071222	12 Dec 2022	-	32,000	-	<1	-	0.1	-	<5
St Marys	SBT-CM-1020	SBT-CM-1020M_071222	12 Dec 2022	-	39,000	-	<1	-	0.1	-	-
St Marys	SBT-CM-1020	SBT-CM-1020D_071222	12 Dec 2022	-	40,000	-	<1	-	<0.1	-	-
St Marys	SBT-CM-1022	SBT-CM-1022_011222	01 Dec 2022	-	46,000	-	<1	-	<0.1	-	<5
St Marys	SBT-CM-1022	SBT-CM-1022	12 Dec 2022	-	53,000	-	<1	-	0.2	-	-
St Marys	SBT-CM-1022	SBT-CM-1022	16 Jan 2023	-	30,000	-	<1	-	<0.1	-	<5
St Marys	SBT-CM-1022	QC17_160123_JF	16 Jan 2023	-	31,000	-	2	-	<0.1	-	-
St Marys	SBT-CM-1022	QC18_160123_JF	16 Jan 2023	18,000	-	-	3	-	<0.2	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jan 2023	-	4,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	22 Feb 2023	-	4,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-0001	QC23_160323_KT	16 Mar 2023	-	2,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-0001	SBT_GW_0001	16 Mar 2023	-	<1,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-0001	QC24-160323-KT	16 Mar 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	SBT_GW_001	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	TRIP 1	19 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	SBT-GW-0001	20 Jul 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001	SBT-GW-0001	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001	QC33_280726_EW	28 Jul 2023	-	-	-	-	-	-	-	<10
St Marys	SBT-GW-0001	QC34_280723_EW	28 Jul 2023	-	-	-	-	-	-	-	<10
St Marys	SBT-GW-0001	SBT-GW-0001	04 Aug 2023	-	-	-	-	-	-	-	<10
St Marys	SBT-GW-0001	SBT-GW-0001	11 Aug 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-0001B	SBT-GW-0001B	30 Jun 2023	-	807,000	-	<1	-	0.4	-	<5
St Marys	SBT-GW-0001B	QC31_300623_KT	30 Jun 2023	-	810,000	-	<1	-	0.3	-	<10
St Marys	SBT-GW-0001B	QC32_300623_KT	30 Jun 2023	-	812,000	-	<1	-	0.3	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	07 Jul 2023	-	830,000	4	<1	0.5	0.4	13	<5
St Marys	SBT-GW-0001B	SBT_GW_0016	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001B	QC35_040823_EW	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-0001B	SBT-GW-0001B	11 Aug 2023	-	-	-	-	-	-	-	<10
St Marys	SBT-GW-1001	SBT-GW-1001_011222	01 Dec 2022	-	895,000	-	3	-	0.7	-	<10
St Marys	SBT-GW-1001	SBT-GW-1001	12 Dec 2022	-	985,000	-	3	-	1.8	-	<5
St Marys	SBT-GW-1001	SBT-GW-1001	17 Jan 2023	-	1,110,000	-	<10	-	1.9	-	<5
St Marys	SBT-GW-1002	SBT-GW-1002_4.5_0.00-0.0	02 Sep 2022	-	-	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1002	SBT-GW-1021-4.5	06 Sep 2022	-	-	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1002	SBT-GW-1002	16 Sep 2022	-	210,000	-	<1	-	0.1	-	<10
St Marys	SBT-GW-1002	SBT-GW-1002_221122	22 Nov 2022	-	169,000	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1002	QC2_221122_JF	22 Nov 2022	190,000	-	4	<1	0.3	<0.2	2	<5
St Marys	SBT-GW-1002	QC1_221122_JF	22 Nov 2022	-	170,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1002	SBT-GW-1002	12 Dec 2022	-	174,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1002	SBT-GW-1002	17 Jan 2023	-	169,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1005	SBT-GW-1005	25 Nov 2022	-	529,000	-	<1	-	0.1	-	<5
St Marys	SBT-GW-1005	SBT-GW-1005	12 Dec 2022	-	724,000	-	<1	-	0.2	-	<5
St Marys	SBT-GW-1005	SBT-GW-1005	17 Jan 2023	-	785,000	-	<1	-	0.2	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012	15 Mar 2023	-	428,000	-	2	-	0.2	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
St Marys	SBT-GW-1012	QC21_150323_KT	15 Mar 2023	-	432,000	-	2	-	0.1	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012_S	29 Mar 2023	-	382,000	-	5	-	<0.1	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	14 Apr 2023	-	357,000	-	9	-	<0.1	-	<5
St Marys	SBT-GW-1012	QC27_140423_KT	14 Apr 2023	-	398,000	-	20	-	<0.1	-	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	14 Apr 2023	-	516,000	-	7	-	<0.1	-	<50
St Marys	SBT-GW-1012	SBT-GW-1012_S	30 Jun 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1012	SBT-GW-1012_D	30 Jun 2023	-	-	-	-	-	-	-	<50
St Marys	SBT-GW-1012	SBT-GW-1012_M	30 Jun 2023	-	-	-	-	-	-	-	<50
St Marys	SBT-GW-1012	SBT_GW_1012-M	14 Jul 2023	-	-	-	-	-	-	-	<50
St Marys	SBT-GW-1012	SBT_GW_1012-S	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT_GW_1012-D	14 Jul 2023	-	-	-	-	-	-	-	<50
St Marys	SBT-GW-1012	SBT-GW-1012-M	20 Jul 2023	-	-	-	-	-	-	-	<20
St Marys	SBT-GW-1012	SBT-GW-1012-D	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	28 Jul 2023	-	-	-	-	-	-	-	<50
St Marys	SBT-GW-1012	SBT-GW-1012-S	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-D	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-M	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012	SBT-GW-1012-S	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012_D	SBT-GW1012C	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012_M	SBT-GW1012B	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1012_S	SBT-GW1012A	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013	15 Mar 2023	-	535,000	-	<1	-	0.2	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013_S	29 Mar 2023	-	638,000	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	14 Apr 2023	-	632,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1013	SBT-GW-1013_S	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013_D	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013_M	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-M	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-D	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT_GW_1013-S	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	28 Jul 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-S	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	04 Aug 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1013	SBT-GW-1013-D	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-D	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-M	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013	SBT-GW-1013-S	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013_D	SBT-GW1013C	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013_M	SBT-GW1013B	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1013_S	SBT-GW1013A	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014	15 Mar 2023	-	462,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1014	QC25_290323_KT	29 Mar 2023	-	546,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	29 Mar 2023	-	552,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	14 Apr 2023	-	606,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_S	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_D	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014_M	30 Jun 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT_GW_1014-S	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT_GW_1014-M	14 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT_G3_1014-S	14 Jul 2023	-	-	-	-	-	-	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
St Marys	SBT-GW-1014	SBT-GW-1014-S	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-D	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-M	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014	SBT-GW-1014-S	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014_D	SBT-GW1014C	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1014_S	SBT-GW1014A	07 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1016	GW1016 - 4.0	21 Oct 2022	-	781,000	-	<1	-	0.4	-	<5
St Marys	SBT-GW-1016	GW1016 - 5.5	21 Oct 2022	-	1,030,000	-	2	-	0.4	-	-
St Marys	SBT-GW-1016	GW1016 - 6.0	21 Oct 2022	-	1,090,000	-	2	-	0.4	-	-
St Marys	SBT-GW-1016	GW1016_4	28 Oct 2022	-	346,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1016	GW1016_6	28 Oct 2022	-	1,050,000	-	<1	-	0.4	-	-
St Marys	SBT-GW-1016	GW1016_7.5	28 Oct 2022	-	1,060,000	-	<1	-	0.4	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_M_160123	16 Jan 2023	-	1,220,000	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1016	SBT-GW-1016_S_160123	16 Jan 2023	-	1,200,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_D_160123	16 Jan 2023	-	348,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_m	22 Feb 2023	-	1,100,000	-	2	-	0.1	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_d	22 Feb 2023	-	1,260,000	-	<1	-	0.2	-	-
St Marys	SBT-GW-1016	SBT-GW-1016_s	22 Feb 2023	-	80,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_M	16 Mar 2023	-	1,100,000	-	<10	-	<1.0	-	-
St Marys	SBT-GW-1016	SBT_GW_1016_D	16 Mar 2023	-	1,360,000	-	<10	-	<1.0	-	<5
St Marys	SBT-GW-1016	SBT_GW_1016_S	16 Mar 2023	-	124,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-1017	GW1017 - 2.0	21 Oct 2022	-	584,000	-	<1	-	<0.1	-	-
St Marys	SBT-GW-1017	GW1017 - 4.0	21 Oct 2022	-	609,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1017	GW1017_2	28 Oct 2022	-	552,000	-	<1	-	0.1	-	<5
St Marys	SBT-GW-1017	GW1017_4	28 Oct 2022	-	589,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1017	SBT-GW-1017S	25 Nov 2022	-	613,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1017	SBT-GW-1017D	25 Nov 2022	-	608,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1017	SBT-GW-1017A	12 Dec 2022	-	563,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1017	SBT-GW-1017B	12 Dec 2022	-	651,000	-	<1	-	0.1	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_13.00-0.0	26 Jul 2022	-	692,000	-	<10	-	<1.0	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_11.50-0.0	26 Jul 2022	-	706,000	-	<10	-	<1.0	-	<5
St Marys	SBT-GW-1018	SBT-BH-1018_11.5	17 Aug 2022	-	819,000	-	<1	-	0.2	-	<5
St Marys	SBT-GW-1018	SBT-BH-1018_13	17 Aug 2022	-	826,000	-	1	-	0.2	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_9.80-0.0	22 Aug 2022	-	726,000	-	<1	-	0.2	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_10.80-0.0	22 Aug 2022	-	762,000	-	1	-	0.2	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_11.80-0.0	22 Aug 2022	-	791,000	-	1	-	0.1	-	<5
St Marys	SBT-GW-1018	SBT-GW-1018_12.80-0.0	22 Aug 2022	-	840,000	-	2	-	0.1	-	<5
St Marys	SBT-GW-1019	SBT-GW-1019_15.40-0.0	26 Jul 2022	-	52,000	-	4	-	<0.1	-	<5
St Marys	SBT-GW-1019	SBT-GW-1019_17.40-0.0	26 Jul 2022	-	382,000	-	4	-	<0.1	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_15.4	17 Aug 2022	-	375,000	-	26	-	<0.1	-	-
St Marys	SBT-GW-1019	SBT-BH-1019_17.4	17 Aug 2022	-	658,000	-	19	-	<0.1	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_15.50-0.0	22 Aug 2022	-	584,000	-	5	-	<0.1	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_16.50-0.0	22 Aug 2022	-	964,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019	SBT-GW-1019_17.50-0.0	22 Aug 2022	-	877,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_14.5	16 Sep 2022	-	466,000	-	2	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_16.0	16 Sep 2022	-	998,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT-GW-1019_R_17.5	16 Sep 2022	-	1,040,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_S_281122	28 Nov 2022	-	922,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_M_281122	28 Nov 2022	-	1,000,000	-	1	-	<0.1	-	-
St Marys	SBT-GW-1019_R	SBT_GW_1019R_D_281122	28 Nov 2022	-	957,000	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rD	12 Dec 2022	-	996,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1019_R	SBT-GW-1019rS	12 Dec 2022	-	968,000	-	<1	-	<0.1	-	<5

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (II+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
St Marys	SBT-GW-1019_R	SBT-GW-1019rM	12 Dec 2022	-	988,000	-	<1	-	<0.1	-	<5
St Marys	SBT-GW-1021	SBT-GW_1021_5.0_0.00-0.0	02 Sep 2022	-	-	-	24	-	<0.1	-	-
St Marys	SBT-GW-1021	SBT-GW-1021-5.0	06 Sep 2022	-	-	-	25	-	<0.1	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	16 Sep 2022	-	16,000	-	23	-	<0.1	-	-
St Marys	SBT-GW-1021	SBT-GW-1021	18 Apr 2023	-	15,000	12	17	<0.1	<0.1	2	-
St Marys	SBT-GW-1021	SBT-GW-1021	04 May 2023	-	16,000	-	9	-	<0.1	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	04 Aug 2022	-	-	-	3	-	2.2	-	-
St Marys	SBT-GW-1232	SBT-GW-1232	30 Aug 2022	-	1,780,000	-	3	-	<0.1	-	<5
St Marys	SBT-GW-1232	QC1	30 Aug 2022	-	-	-	2	-	0.2	-	-
St Marys	SBT-GW-1232	QC2	30 Aug 2022	-	-	-	3	-	0.3	-	-
St Marys	SBT-GW-1233	SBT-GW-1233	15 Sep 2022	-	1,720,000	-	5	-	<0.1	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	29 Jul 2022	-	1,900,000	-	1	-	1.7	-	<10
St Marys	SBT-GW-1234	SBT-GW-1234	30 Aug 2022	-	1,940,000	-	11	-	<0.1	-	-
St Marys	SBT-GW-1234	SBT-GW-1234	15 Sep 2022	-	1,940,000	-	12	-	<0.1	-	-
St Marys	SBT-GW-1347a	SBT-GW-1347a	30 Jun 2023	-	1,090,000	-	2	-	0.2	-	-
St Marys	SBT-GW-1347b	SBT-GW-1347b	30 Jun 2023	-	421,000	-	8	-	<0.1	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347c	30 Jun 2023	-	169,000	-	3	-	<0.1	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	07 Jul 2023	-	205,000	34	2	0.2	<0.1	33	<5
St Marys	SBT-GW-1347c	SBT_GW_1347-C	14 Jul 2023	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1347c	SBT-GW-1347C	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347C	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1347c	SBT-GW-1347-C	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1348a	SBT-GW-1348a	30 Jun 2023	-	1,070,000	-	2	-	0.8	-	<5
St Marys	SBT-GW-1348b	SBT-GW-1348b	30 Jun 2023	-	1,490,000	-	8	-	<0.1	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348c	30 Jun 2023	-	757,000	-	2	-	<0.1	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	07 Jul 2023	-	792,000	13	<1	0.1	<0.1	17	<5
St Marys	SBT-GW-1348c	DUP_070723	07 Jul 2023	-	801,000	24	<1	0.4	0.4	28	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	20 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348C	28 Jul 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	04 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1348c	SBT-GW-1348-C	11 Aug 2023	-	-	-	-	-	-	-	<5
St Marys	SBT-GW-1803	SBT-GW-1803	01 May 2023	-	19,000	-	1	-	<0.1	-	<5
St Marys	SBT-GW-1803	SBT-GW-1803	04 May 2023	-	78,000	-	<1	-	<0.1	-	<5
St Marys	SMGW-BH-A002	BH-A002	06 Sep 2019	-	812,000	-	<1	-	<0.1	-	<5
St Marys	SMGW-BH-A002		18 Dec 2019	1,060,000	-	2	1	<0.1	<0.1	<2	<5
St Marys	SMGW-BH-A002		24 Jan 2020	913,000	-	<2	<1	0.1	0.1	<2	<5
St Marys	SMGW-BH-A002		06 Mar 2020	251,000	-	3	2	0.1	0.1	<1	<5
St Marys	SMGW-BH-A002		20 Apr 2020	991,000	-	2	2	<0.1	<0.1	<1	<5
St Marys	SMGW-BH-A002		27 Aug 2020	-	293,000	<1	<1	0.2	0.2	<1	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A002		22 Apr 2021	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A102		06 Mar 2020	251,000	-	3	2	<0.1	<0.1	<3	<5
St Marys	SMGW-BH-A102		05 Jun 2020	-	257,000	3	3	<0.1	<0.1	<1	<5
St Marys	SMGW-BH-A102		29 Jun 2020	-	296,000	2	2	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A102	FD04	29 Jun 2020	-	293,000	2	2	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A102		29 Jul 2020	-	317,000	2	1	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A102		27 Aug 2020	-	278,000	4	2	<0.1	<0.1	3	-
St Marys	SMGW-BH-A102		15 Feb 2021	-	260,000	3	2	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A102	FD5	15 Feb 2021	-	262,000	3	2	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A102		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A103		26 May 2020	-	570,000	2	2	-	-	2	-
St Marys	SMGW-BH-A103	FD03	26 May 2020	-	567,000	1	1	<0.1	<0.1	2	-
St Marys	SMGW-BH-A103		01 Jul 2020	-	549,000	3	1	<0.1	<0.1	4	-
St Marys	SMGW-BH-A103		29 Jul 2020	-	468,000	1	<1	<0.1	<0.1	2	<5
St Marys	SMGW-BH-A103		25 Aug 2020	-	407,000	2	<1	<0.1	<0.1	<1	-
St Marys	SMGW-BH-A103		17 Feb 2021	-	321,000	<1	1	<0.1	<0.1	<1	-

Table D1: Baseline Groundwater Results - St Marys Station to Orchard Hills Station

				Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Pentachloroethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				500	500	1	1	0.1	0.1	1	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.2	0.2		80
AS2159 – 2009 Piling – Design and Installation											
PFAS NEMP 2020 Freshwater 99%											
WSA SBT - EPL 21672 (amended 10 May 2023)										1	
St Marys	SMGW-BH-A202		02 Dec 2020	-	5,000	2	1	<0.1	<0.1	2	<5
St Marys	SMGW-BH-A202		02 Mar 2021	-	113,000	2	<1	<0.1	<0.1	4	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		22 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A202		26 May 2021	-	34,000	10	2	0.2	<0.1	12	<5
St Marys	SMGW-BH-A302	BH-A302-220221	22 Feb 2021	-	-	11	8	<0.2	<0.2	3	-
St Marys	SMGW-BH-A302		22 Feb 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A302		18 Mar 2021	-	-	11	-	<0.2	-	1.9	<5
St Marys	SMGW-BH-A302		22 Apr 2021	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A302	SMGW-BH-A302	01 Aug 2022	-	-	-	4	-	<0.1	-	-
St Marys	SMGW-BH-A321		12 Feb 2021	820,000	-	7	10	<0.2	<0.2	3	<5
St Marys	SMGW-BH-A321		17 Feb 2021	-	-	-	-	-	-	-	<5
St Marys	SMGW-BH-A321	BH-A321-180321	18 Mar 2021	-	-	5.1	-	<0.2	-	1.2	-
St Marys	SMGW-BH-A321		23 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321	A321	01 Aug 2022	-	-	-	<1	-	<0.1	-	-
St Marys	SMGW-BH-A321	Q14-JF-1082022	01 Aug 2022	-	-	-	1	-	<0.1	-	-
St Marys	SMGW-BH-A321	Q15-JF-1082022	01 Aug 2022	-	-	1	-	<0.2	-	5	-
St Marys	SMGW-BH-A321S		18 Feb 2021	770,000	-	-	-	210,000	-	-	-
St Marys	SMGW-BH-A321S	BH-A321S-220221	22 Feb 2021	-	-	-	<1	-	0.8	-	-
St Marys	SMGW-BH-A321S	BH-A321S-180321	18 Mar 2021	-	-	2.2	-	2.4	-	8.5	-
St Marys	SMGW-BH-A321S		23 Apr 2021	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A321S	A321-S	01 Aug 2022	-	-	-	2	-	<0.1	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361	30 Jun 2023	-	751,000	-	2	-	<0.1	-	-
St Marys	SMGW-BH-A361	SMGW-BH-A361C	07 Jul 2023	-	861,000	14	1	1.1	39.3	11	-
St Marys	SMGW-BH-A401	SM GW-BH-A401	23 Nov 2021	-	973,000	-	2	-	0.2	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	21 Dec 2021	-	1,020,000	-	-	-	-	-	-
St Marys	SMGW-BH-A401	A401_4	27 Jul 2022	-	1,010,000	-	3	-	0.4	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	15 Dec 2022	-	942,000	-	<10	-	<1.0	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	01 Feb 2023	-	933,000	-	3	-	0.3	-	-
St Marys	SMGW-BH-A401	SMGW-BH-A401	02 Mar 2023	-	763,000	-	2	-	0.2	-	-
St Marys	SMGW-BH-A402	SM GW-BH-A402	23 Nov 2021	-	5,000	-	4	-	<0.1	-	-
St Marys	SMGW-BH-A402	SMGW-BH-A402	21 Dec 2021	-	3,000	-	-	-	-	-	-
St Marys	SMGW-BH-A402	A402_6	27 Jul 2022	-	1,020,000	-	4	-	0.4	-	-
St Marys	SMGW-BH-A402	A402_2.50	01 Aug 2022	-	-	-	2	-	<0.1	-	-
St Marys	SMGW-BH-A402	A402_6.00	01 Aug 2022	-	-	-	2	-	<0.1	-	-
St Marys	SMGW-BH-A406	SMGW-BH-A406	25 May 2022	-	305,000	-	2	-	0.2	-	-
St Marys	SMGW-BH-A406S	SMGW-BH-A406S	25 May 2022	-	503,000	-	1	-	0.3	-	-
St Marys	SMGW-GW02	SMGW_GW02_S	28 Nov 2022	-	124,000	-	<1	-	0.2	-	-
St Marys	SMGW-GW02	SMGW_GW02_D	28 Nov 2022	-	126,000	-	<1	-	0.2	-	-
St Marys	SMGW-GW02	QC8-121222-JP	01 Dec 2022	230,000	-	7	<1	<0.2	<0.2	13	-
St Marys	SMGW-GW02	SMGW-GW02-M	12 Dec 2022	-	240,000	-	<1	-	<0.1	-	<5
St Marys	SMGW-GW02	SMGW-GW02-D	12 Dec 2022	-	256,000	-	<1	-	<0.1	-	-
St Marys	SMGW-GW02	SMGW-GW02-S	12 Dec 2022	-	211,000	-	<1	-	<0.1	-	-
St Marys	WSA GW01		28 Mar 2017	-	-	-	-	-	-	-	-
St Marys	WSA GW01		29 Mar 2017	-	-	-	<1	-	<0.2	-	-
St Marys	WSA GW01		15 Jun 2017	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Oct 2017	-	-	-	<1	-	<0.2	-	-
St Marys	WSA GW01		06 Oct 2017	-	-	-	-	-	-	-	-
St Marys	WSA GW01		19 Dec 2017	-	-	-	<1	-	<0.2	-	-
St Marys	WSA GW01		17 Apr 2018	-	-	-	<1	-	<0.2	-	-
St Marys	WSA GW01		03 Jul 2018	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Jul 2018	-	-	-	<1	-	<0.2	-	-
St Marys	WSA GW01		05 Sep 2018	-	-	-	<1	-	<0.2	-	<5
St Marys	WSA GW01		07 Sep 2018	-	-	-	-	-	-	-	-
St Marys	WSA GW01		13 Dec 2018	-	-	-	<1	-	<0.2	-	<5
St Marys	WSA GW01		14 Dec 2018	-	-	-	-	-	-	-	-
St Marys	WSA GW01		05 Apr 2019	-	-	-	<1	-	<0.2	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

	Magnesium	Magnesium (filtered)	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Iron	Iron (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1,000	1,000	1	1	0.1	0.1	1	1	1	1	50	50	1	1	0.1	0.1	1	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.2	0.2			1.4	1.4			3.4	3.4	0.6	0.6	11	11
AS2159 – 2009 Piling – Design and Installation																		
Airport Regulations - Water pollution - accepted limits - fresh water			50	50	0.2	0.2	10	10	2	2	1,000	1,000	1	1	0.1	0.1	15	15
PFAS NEMP 2020 Freshwater 99%																		
WSA SBT - EPL 21672 (amended 10 May 2023)							1	1	1.4	1.4								

Monitoring Zone	Location Code	Field ID	Date																		
Aerotropolis	MW-01	MW-01	22 Jul 2022	-	400,000	-	1	-	0.1	-	3	-	2	-	-	-	<1	-	<0.1	-	5
Aerotropolis	MW02	MW02_011222	01 Dec 2022	-	448,000	-	<1	-	<0.1	-	<1	-	4	6,110	<50	-	<1	-	<0.1	-	2
Aerotropolis	MW02	QC5-011222-JP	01 Dec 2022	-	416,000	-	<1	-	<0.1	-	<1	-	3	7,650	<50	-	<1	-	<0.1	-	2
Aerotropolis	MW02	MW02	13 Dec 2022	-	523,000	-	<1	-	<0.1	-	<1	-	2	24,400	3,040	-	<1	-	<0.1	-	4
Aerotropolis	MW02	MW02	18 Jan 2023	-	622,000	-	<1	-	<0.1	-	<1	-	<1	40,700	710	-	<1	-	<0.1	-	2
Aerotropolis	MW-02	MW-02	22 Jul 2022	-	842,000	-	1	-	0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	5
Aerotropolis	MW-03	MW-03_0.00-0.0	25 Jul 2022	-	809,000	-	10	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	16
Aerotropolis	MW-04	MW-04_0.00-0.0	25 Jul 2022	-	402,000	-	41	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	9
Aerotropolis	MW-06	MW-06	22 Jul 2022	-	659,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	1
Aerotropolis	MW-201	MW-201	22 Jul 2022	-	443,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1
Aerotropolis	MW-202	MW-202	22 Jul 2022	-	226,000	-	8	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	1
Aerotropolis	MW-203	MW-203	22 Jul 2022	-	373,000	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	1
Aerotropolis	MW-205	MW-205_0.00-0.0	25 Jul 2022	-	446,000	-	2	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	2
Aerotropolis	MW-206	MW-206_0.00-0.0	25 Jul 2022	-	656,000	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	1
Aerotropolis	MW-206	25722-D1	25 Jul 2022	-	-	-	<1	-	<0.1	-	19	-	9	-	-	-	<1	-	<0.1	-	1
Aerotropolis	MW01	MW01_011222	01 Dec 2022	-	1,200,000	-	<1	-	<0.1	-	<1	-	<1	770	<50	-	<1	-	<0.1	-	6
Aerotropolis	MW01	MW01	13 Dec 2022	-	989,000	-	<1	-	<0.1	-	<1	-	<1	1,400	60	-	<1	-	<0.1	-	4
Aerotropolis	MW01	MW01	18 Jan 2023	-	1,190,000	-	<1	-	<0.1	-	<1	-	2	2,860	<50	-	<1	-	<0.1	-	3
Aerotropolis	NUMAC16_IBC	NUMAC16_IBC	26 Jul 2022	-	-	<1	-	<0.1	-	<1	-	1	-	-	-	<1	-	<0.1	-	<1	-
Aerotropolis	SBT-BH-4010	SBT-BH-4010	01 Feb 2023	-	13,000	-	<1	-	<0.1	-	<1	-	2	12,800	<50	-	<1	-	<0.1	-	<1
Aerotropolis	SBT-BH-4010	SBT-GW-4010	02 Mar 2023	-	10,000	-	1	-	<0.1	-	<1	-	3	1,420	90	-	<1	-	<0.1	-	1
Aerotropolis	SBT-BH-4010	SBT-GW-4010	29 Mar 2023	-	9,000	-	2	-	<0.1	-	<1	-	5	1,160	300	-	<1	-	<0.1	-	2
Aerotropolis	SBT-BH-4011	SBT-BH-4011_DF_Mid-408	03 Aug 2022	-	-	38	-	1.7	-	222	-	547	-	-	-	167	-	<1.0	-	377	-
Aerotropolis	SBT-BH-4011	SBT-BH-4011_DF-4082022	03 Aug 2022	-	-	5	-	0.3	-	23	-	95	-	-	-	12	-	<0.1	-	77	-
Aerotropolis	SBT-BH-4012	SBT-BH-4012_21.29-0.0	25 Jul 2022	-	-	207	-	2.1	-	487	-	827	-	-	-	320	-	<1.0	-	624	-
Aerotropolis	SBT-BH-4012	SBT-BH-4012_drillingmud-9	09 Aug 2022	-	-	138	-	1.8	-	452	-	1,020	-	-	-	366	-	<0.1	-	650	-
Aerotropolis	SBT-BH-4016	SBT-BH-4016-15.2-15.7.	21 Jul 2022	-	-	14	-	0.2	-	66	-	204	-	-	-	67	-	<1.0	-	80	-
Aerotropolis	SBT-BH-4016	SBT-BH-4016_21.29	22 Jul 2022	-	-	7	-	0.2	-	24	-	100	-	-	-	16	-	<0.1	-	6	-
Aerotropolis	SBT-BH-4019	BH4019_R-JF-26072022	26 Jul 2022	-	-	<1	-	<0.1	-	8	-	7	-	-	-	4	-	<0.1	-	8	-
Aerotropolis	SBT-BH-4019	BH4109_middle	26 Jul 2022	-	-	118	-	3.1	-	647	-	2,010	-	-	-	576	-	<0.1	-	821	-
Aerotropolis	SBT-GW-4014	SBT-GW-4014	15 Sep 2022	-	399,000	-	2	-	<0.1	-	<1	-	<1	-	<50	-	<1	-	<0.1	-	5
Aerotropolis	SBT-GW-4014	QC43_JF_15092022	15 Sep 2022	-	397,000	-	2	-	<0.1	-	<1	-	<1	-	<50	-	<1	-	<0.1	-	5
Aerotropolis	SBT-GW-4014	SBT-GW-4014_011222	01 Dec 2022	-	350,000	-	4	-	<0.1	-	<1	-	<1	60	280	-	<1	-	<0.1	-	4
Aerotropolis	SBT-GW-4014	SBT_GW_4014	13 Dec 2022	-	398,000	-	5	-	<0.1	-	<1	-	<1	4,050	240	-	<1	-	<0.1	-	5
Aerotropolis	SBT-GW-4017	SBT-GW-4017_BC-2082022	02 Aug 2022	-	-	2	-	<0.1	-	15	-	25	-	-	-	12	-	<0.1	-	12	-
Aerotropolis	SBT-GW-4017	SBT-GW-4017_DR-2082022	02 Aug 2022	-	-	<1	-	<0.1	-	3	-	<1	-	-	-	<1	-	<0.1	-	1	-
Aerotropolis	SBT-GW-4017	SBT-GW-4017_AC-3082022	03 Aug 2022	-	-	164	-	3.4	-	1,050	-	2,120	-	-	-	817	-	<1	-	1,290	-
Aerotropolis	SBT-GW-4017	SBT-GW-4017_DC-3082022	03 Aug 2022	-	-	60	-	3.2	-	803	-	1,920	-	-	-	678	-	<1	-	946	-
Aerotropolis	SBT-GW-4017	SBT-GW-4017_AF-3082022	03 Aug 2022	-	-	15	-	0.2	-	62	-	139	-	-	-	51	-	<1	-	68	-
Aerotropolis	SBT-GW-4017	SBT-GW-4017	15 Sep 2022	-	306,000	-	<1	-	<0.1	-	<1	-	<1	-	400	-	<1	-	<0.1	-	3
Aerotropolis	SBT-GW-4017	SBT-GW-4017_011222	01 Dec 2022	-	420,000	-	1	-	<0.1	-	<1	-	<1	6,900	<50	-	<1	-	<0.1	-	6
Aerotropolis	SBT-GW-4017	SBT_GW_4017	13 Dec 2022	-	475,000	-	<1	-	<0.1	-	<1	-	<1	3,900	<50	-	<1	-	<0.1	-	8
Aerotropolis	SBT-GW-4019	SBT-GW-4019	15 Sep 2022	-	243,000	-	4	-	<0.1	-	<1	-	<1	-	1,010	-	<1	-	<0.1	-	4
Aerotropolis	SBT-GW-4019	SBT-GW-4019_011222	01 Dec 2022	-	221,000	-	4	-	<0.1	-	<1	-	<1	8,780	780	-	<1	-	<0.1	-	3
Aerotropolis	SBT-GW-4019	SBT-GW-4019	13 Dec 2022	-	238,000	-	6	-	<0.1	-	<1	-	<1	2,140	610	-	<1	-	<0.1	-	5
Aerotropolis	SBT-GW-4021	SBT-GW-4021_011222	01 Dec 2022	-	576,000	-	<1	-	<0.1	-	<1	-	<1	3,160	<50	-	<1	-	<0.1	-	1
Aerotropolis	SBT-GW-4021	SBT-GW-4021	13 Dec 2022	-	626,000	-	<1	-	<0.1	-	<1	-	<1	233,000	<50	-	<1	-	<0.1	-	3
Aerotropolis	SBT-GW-4021	SBT-GW-4021	18 Jan 2023	-	641,000	-	<1	-	<0.1	-	<1	-	<1	102,000	160	-	<1	-	<0.1	-	3
Aerotropolis	SBT-GW-4021	QC19_180123_JF	18 Jan 2023	-	634,000	-	<1	-	<0.1	-	<1	-	<1	122,000	160	-	<1	-	<0.1	-	3
Aerotropolis	SBT-GW-4803	SBT-GW-4803	05 May 2023	-	574,000	-	3	-	<0.1	-	<1	-	<1	21,200	<50	-	<1	-	<0.1	-	22
Aerotropolis	SBT-GW-4803	SBT-GW-4803	24 May 2023	-	526,000	-	2	-	<0.1	-	<1	-	<1	40,000	2,460	-	<1	-	<0.1	-	46
Aerotropolis	SMGW-BH-D109		29 Jun 2020	-	210,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	4,440	4,580	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D109	FD03A	29 Jul 2020	-	204,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	4,750	4,290	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D109		29 Jul 2020	-	213,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	4,800	4,450	<1	<1	<0.1	<0.1	<1	<1

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Aerotropolis	SMGW-BH-D109		27 Aug 2020	-	167,000	2	1	<0.1	<0.1	<1	<1	1	<1	5,230	3,820	<1	<1	<0.1	<0.1	6	<1
Aerotropolis	SMGW-BH-D109		27 Nov 2020	-	222,000	1	<1	<0.1	<0.1	<1	<1	2	<1	-	4,000	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D109	FD04A	15 Feb 2021	-	236,000	<1	<1	<0.1	<0.1	<1	<1	<1	1	4,570	3,640	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D109		15 Feb 2021	-	242,000	1	<1	<0.1	<0.1	<1	<1	<1	1	4,890	3,770	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D109S		11 Aug 2020	-	767,000	5	4	0.2	0.2	2	1	9	2	770	<50	<1	<1	<0.1	<0.1	27	23
Aerotropolis	SMGW-BH-D109S		27 Aug 2020	-	667,000	9	4	0.2	<0.1	9	<1	16	<1	4,070	170	6	<1	<0.1	<0.1	33	22
Aerotropolis	SMGW-BH-D109S		28 Sep 2020	-	852,000	9	8	<0.1	<0.1	1	<1	4	<1	1,160	680	1	<1	<0.1	<0.1	17	18
Aerotropolis	SMGW-BH-D109S		27 Nov 2020	-	825,000	16	12	<0.1	<0.1	1	<1	<1	<1	900	750	<1	<1	<0.1	<0.1	12	11
Aerotropolis	SMGW-BH-D109S		01 Feb 2021	-	923,000	16	15	<0.1	<0.1	<1	<1	1	<1	1,110	830	<1	<1	<0.1	<0.1	12	10
Aerotropolis	SMGW-BH-D109S		23 Feb 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aerotropolis	SMGW-BH-D109S	SMGW-BH-D109S_071222	07 Dec 2022	-	554,000	-	3	-	<0.1	-	<1	-	<1	2,510	1,490	-	<1	-	<0.1	-	5
Aerotropolis	SMGW-BH-D109S	SMGW-BH-D109S	15 Dec 2022	-	606,000	-	2	-	<0.1	-	<1	-	<1	8,820	550	-	<1	-	<0.1	-	4
Aerotropolis	SMGW-BH-D207		01 Sep 2020	-	171,000	2	1	<0.1	<0.1	<1	<1	18	<1	960	590	2	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D207		28 Sep 2020	-	204,000	<1	1	<0.1	<0.1	<1	<1	2	<1	880	720	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D207	FD301	28 Sep 2020	-	211,000	1	1	<0.1	<0.1	<1	<1	2	<1	870	740	<1	<1	<0.1	<0.1	<1	<1
Aerotropolis	SMGW-BH-D207	FD302	17 May 2021	-	195,000	1	<1	0.2	<0.1	<1	<1	<1	<1	520	360	<1	<1	<0.1	<0.1	1	1
Aerotropolis	SMGW-BH-D207		17 May 2021	-	192,000	<1	<1	<0.1	<0.1	<1	<1	<1	<1	530	360	<1	<1	<0.1	<0.1	1	1
Aerotropolis	SMGW-BH-D208		17 May 2021	-	159,000	4	<1	0.1	0.1	5	<1	15	8	6,320	880	10	6	<0.1	<0.1	477	495
Aerotropolis	SMGW-BH-D308		18 Feb 2021	190,000	-	<1	2	<0.2	<0.2	<1	<1	<1	10	<50	290	<1	<1	<0.1	<0.1	2	14
Aerotropolis	SMGW-BH-D322	BH-0322-150321	15 Mar 2021	330,000	-	<1	-	<0.2	-	<1	-	<1	-	340	-	<1	-	<0.01	-	2	-
Aerotropolis	SMGW-BH-D322		15 Mar 2021	330,000	-	<1	-	<0.2	-	<1	-	<1	-	340	-	<1	-	<0.01	-	2	-
Aerotropolis	SMGW-BH-D324		22 Feb 2021	740,000	-	<1	-	<0.2	-	<1	-	<1	-	600	-	<1	-	<0.1	-	6	-
Aerotropolis	SMGW-BH-D324	BH-D324-150321	15 Mar 2021	-	-	1	-	<0.2	-	<1	-	<1	-	320	-	<1	-	<0.01	-	3	-
Aerotropolis	SMGW-BH-D326		18 Feb 2021	350,000	-	1	1	<0.2	<0.2	<1	<1	3	3	600	900	<1	<1	<0.1	<0.1	66	24
Aerotropolis	SMGW-BH-D326	BH-D326-160321	16 Mar 2021	-	-	1.5	-	<0.2	-	-	<1	-	-	-	-	-	-	<0.01	-	-	-
Aerotropolis	SMGW-BH-D329		18 Feb 2021	1,200,000	-	1	<1	<0.2	<0.2	1	<1	2	<1	<50	<50	<1	<1	<0.1	<0.1	3	3
Aerotropolis	SMGW-BH-D329	BH-D329-160321	16 Mar 2021	-	-	1	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	-	-	-
Aerotropolis	SMGW-BH-D401	FD01 22.04.21	22 Apr 2022	-	216,000	-	2	-	<0.1	-	<1	-	<1	-	1,300	-	<1	-	<0.1	-	16
Aerotropolis	SMGW-BH-D401	SMGW BH-D401	22 Apr 2022	-	220,000	-	2	-	<0.1	-	<1	-	<1	-	1,270	-	<1	-	<0.1	-	16
Aerotropolis	SMGW-BH-D401	SMGW-BH-D401	24 May 2022	-	244,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aerotropolis	VWP_4406	VWP_4406_CRS_XL-FL-260720	26 Jul 2022	-	-	<1	-	0.5	-	<1	-	25	-	-	-	<1	-	<0.1	-	<1	-
Aerotropolis	VWP_4406	VWP_4406_Start-FL-260720	26 Jul 2022	-	-	15	-	0.5	-	49	-	287	-	-	-	65	-	<0.1	-	53	-
Aerotropolis	VWP_4406	VWP_4406_JF-26072022	26 Jul 2022	-	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1	-
Airport Business Park	SBT-GW-3003_c	SBT-GW-3003-c_301122	30 Nov 2022	-	682,000	-	<1	-	<0.1	-	3	-	<1	3,610	770	-	<1	-	<0.1	-	8
Airport Business Park	SBT-GW-3003_c	SBT-GW-3003C	15 Dec 2022	-	668,000	-	<10	-	<1.0	-	<10	-	<10	3,200	850	-	<10	-	<0.1	-	<10
Airport Business Park	SBT-GW-3003_c	SBT-GW-3003_C	19 Jan 2023	-	685,000	-	<10	-	<1.0	-	<10	-	<10	4,980	830	-	<10	-	<0.1	-	<10
Airport Business Park	SBT-GW-3003-a	SBT-GW-3003-a_301122	30 Nov 2022	-	862,000	-	2	-	<0.1	-	<1	-	<1	10,200	3,290	-	<1	-	<0.1	-	21
Airport Business Park	SBT-GW-3003-a	QC13-151222-JP	15 Dec 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-a	SBT-GW-3003A	15 Dec 2022	-	868,000	-	<10	-	<1.0	-	<10	-	<10	10,700	2,410	-	<10	-	<0.1	-	21
Airport Business Park	SBT-GW-3003-a	SBT-GW-3003_A	19 Jan 2023	-	850,000	-	<10	-	<1.0	-	<10	-	<10	8,610	3,520	-	<10	-	<0.1	-	12
Airport Business Park	SBT-GW-3003-b	SBT-GW-3003-b_301122	30 Nov 2022	-	1,050,000	-	1	-	<0.1	-	<1	-	<1	22,700	130	-	<1	-	<0.1	-	12
Airport Business Park	SBT-GW-3003-b	SBT-GW-3003B	15 Dec 2022	-	1,100,000	-	<10	-	<1.0	-	<10	-	<10	66,600	420	-	<10	-	<0.1	-	11
Airport Business Park	SBT-GW-3003-b	SBT-GW-3003-B	19 Jan 2023	-	1,190,000	-	<20	-	<2.0	-	<20	-	<20	16,000	590	-	<20	-	<0.1	-	<20
Airport Terminal	SBT-GW-3006W	SBT-GW-3006W_301122	30 Nov 2022	-	10,000	-	<1	-	<0.1	-	15	-	2	230	140	-	<1	-	<0.1	-	1
Airport Terminal	SBT-GW-3006W	SBT-GW-3006	15 Dec 2022	-	1,000	-	<1	-	<0.1	-	16	-	<1	4,530	280	-	<1	-	<0.1	-	1
Airport Terminal	SBT-GW-3006W	SBT-GW-3006_W	19 Jan 2023	-	2,000	-	<1	-	<0.1	-	12	-	1	4,720	420	-	<1	-	<0.1	-	1
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-a	30 Nov 2022	-	-	-	3	-	<0.1	-	<1	-	<1	-	440	-	<1	-	<0.1	-	17
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012 A	15 Dec 2022	-	81,000	-	1	-	<0.1	-	<1	-	1	11,200	370	-	<1	-	<0.1	-	12
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012_A	19 Jan 2023	-	82,000	-	1	-	<0.1	-	<1	-	8	197,000	620	-	<1	-	<0.1	-	8
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-b_301122	30 Nov 2022	-	1,110,000	-	<1	-	<0.1	-	<1	-	<1	140,000	<50	-	<1	-	<0.1	-	2
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012 B	15 Dec 2022	-	1,100,000	-	<10	-	<1.0	-	<10	-	<10	2,000	<100	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012_B	19 Jan 2023	-	1,170,000	-	<10	-	<1.0	-	<10	-	<10	11,000	<100	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-c_301122	30 Nov 2022	-	408,000	-	2	-	<0.1	-	2	-	<1	5,430	2,070	-	<1	-	<0.1	-	2
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012 C	15 Dec 2022	-	526,000	-	<10	-	<1.0	-	<10	-	<10	4,090	1,950	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012_C	19 Jan 2023	-	573,000	-	<10	-	<1.0	-	<10	-	<10	10,400	2,450	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3022	SBT-GW-3022_301122	30 Nov 2022	-	676,000	-	6	-	<0.1	-	<1	-	<1	25,400	1,380	-	<1	-	<0.1	-	5
Airport Terminal	SBT-GW-3022	QC15-151222-JP	15 Dec 2022	-	730,000	-	<10	-	<1.0	-	<10	-	<10	5,320	3,180	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3022	SBT-GW-3022	15 Dec 2022	-	697,000	-	<10	-	<1.0	-	<10	-	<10	21,400	1,590	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-3022	SBT-GW-3022	19 Jan 2023	-	808,000	-	<10	-	<1.0	-	<10	-	<10	17,800	2,390	-	<10	-	<0.1	-	<10
Airport Terminal	SBT-GW-4000	SBT-GW-4000	24 May 2023	-	368,000	-	1	-	<0.1	-	<1	-	<1	20,600	570	-	<1	-	<0.1	-	37
Airport Terminal	SBT-GW-4000	SBT-GW-4000	23 Jun 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-4000	SBT-GW-4000	23 Jun 2023	-	447,000	-	2	-	<0.1	-	<1	-	<1	24,100	2,020	-	<1	-	<0.1	-	3
Bringelly	BH-B303	BH-B303-170221	17 Feb 2021	820,000	-	2	<1	0.2	<0.2	1	<1	6	4	680	200	<1	<1	<0.1	<0.1	110	95
Bringelly	SBT-BH-4005	SBT_GW_4005	25 Jul 2022	-	<1,000	-	1	-	<0.1	-	30	-	6	-	-	-	<1	-	<0.1	-	<1
Bringelly	SBT-BH-4006	SBT-BH-4006	07 Sep 2022	-	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1	-
Bringelly	SBT-GW-4002	SBT-GW-4002_0.00-0.0	25 Jul 2022	-	597,000	-	3	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	10
Bringelly	SBT-GW-4003	25722-D2	25 Jul 2022	-	-	-	2	-	<0.1	-	<1	-	2	-	-	-	<1	-	<0.1	-	16
Bringelly</																					

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Bringelly	SBT-GW-4022	SBT-GW-4022_0.00-0.0	25 Jul 2022	-	1,190,000	-	1	-	0.2	-	2	-	2	-	-	-	<1	-	<0.1	-	9
Bringelly	SBT-GW-4800	SBT-GW-4800	05 May 2023	-	669,000	-	16	-	<0.1	-	<1	-	<1	9,000	4,930	-	<1	-	<0.1	-	5
Bringelly	SBT-GW-4800	SBT-GW-4800	24 May 2023	-	581,000	-	17	-	<0.1	-	<1	-	<1	13,900	7,840	-	<1	-	<0.1	-	103
Bringelly	SBT-GW-4801	SBT-GW-4801	05 May 2023	-	583,000	-	24	-	<0.1	-	<1	-	<1	950	<50	-	<1	-	<0.1	-	29
Bringelly	SBT-GW-4801	SBT-GW-4801	24 May 2023	-	768,000	-	21	-	<0.1	-	<1	-	<1	11,000	530	-	<1	-	<0.1	-	20
Bringelly	SBT-GW-4802	SBT-GW-4802	05 May 2023	-	530,000	-	2	-	<0.1	-	1	-	1	19,800	<50	-	<1	-	<0.1	-	23
Bringelly	SBT-GW-4802	SBT-GW-4802	24 May 2023	-	513,000	-	1	-	<0.1	-	<1	-	3	9,530	<50	-	<1	-	<0.1	-	63
Bringelly	SMGW-BH-D303		17 Feb 2021	820,000	-	2	<1	<0.2	<0.2	<1	<1	6	4	680	200	<1	<1	<0.1	<0.1	110	95
Bringelly	SMGW-BH-D303		17 Feb 2021	820,000	-	2	<1	<0.2	<0.2	1	<1	-	-	680	200	<1	<1	<0.1	<0.1	110	95
Bringelly	SMGW-BH-D303		15 Mar 2021	1,100,000	-	<1	<1	<0.2	<0.2	<1	<1	1	<1	130	680	<1	<1	<0.01	<0.1	11	10
Bringelly	SMGW-BH-D303		05 May 2021	800,000	-	2	<1	<0.2	<0.2	<1	<1	-	-	330	<50	<1	<1	<0.1	<0.1	-	-
Bringelly	SMGW-BH-D303S		18 Feb 2021	2,000,000	-	4	3	<0.2	<0.2	1	<1	-	-	850	180	<1	<1	<0.1	<0.1	9	9
Bringelly	SMGW-BH-D303S		15 Mar 2021	2,100,000	-	4	<1	<0.2	<0.2	3	<1	-	1	-	230	-	<1	<0.01	<0.1	12	6
Bringelly	SMGW-BH-D303S		05 May 2021	1,600,000	-	3	2	<0.2	<0.2	<1	<1	1	<1	750	<50	<1	<1	<0.1	<0.1	4	6
Bringelly	SMGW-BH-D303S		05 May 2021	1,600,000	-	3	3	<0.2	<0.2	<1	<1	<1	<1	220	<50	<1	<1	<0.1	<0.1	4	6
Bringelly	SMGW-BH-D305		15 Feb 2021	980,000	-	7	<1	<0.2	<0.2	30	<1	30	3	22,000	230	10	<1	<0.1	<0.1	17	7
Bringelly	SMGW-BH-D305		10 May 2021	1,500,000	-	4	2	<0.2	<0.2	<1	<1	-	<1	210	210	<1	<1	<0.1	<0.1	23	23
Bringelly	SMGW-BH-D305		10 May 2021	1,400,000	-	3	<1	<0.2	<0.2	<1	<1	-	<1	350	350	<1	<1	<0.1	<0.1	-	-
Bringelly	SMGW-BH-D405	SMGW-BH-D405	18 Aug 2022	-	278,000	-	5	-	<0.1	-	<1	-	41	-	-	-	<1	-	<0.1	-	21
Bringelly	SMGW-BH-D405S	SMGW-BH-D405S	29 Mar 2022	-	60,000	-	7	-	<0.1	-	<1	-	<1	-	500	-	<1	-	<0.1	-	2
Bringelly	SMGW-BH-D405S	FD01. 22.03.29	29 Mar 2022	-	-	-	7	-	<0.1	-	<1	-	<1	-	500	-	<1	-	<0.1	-	2
Southern Tunnels	SBT-BH-4008	SBT-BH-4008	28 Oct 2022	-	-	<1	-	<0.1	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1	-
Southern Tunnels	SBT-BH-4008	SBT-BH-4008	01 Feb 2023	-	211,000	-	6	-	<0.1	-	<1	-	<1	2,550	2,190	-	<1	-	<0.1	-	3
Southern Tunnels	SBT-BH-4008	SBT-GW-4008	02 Mar 2023	-	230,000	-	7	-	<0.1	-	<1	-	<1	2,410	1,980	-	<1	-	<0.1	-	<1
Southern Tunnels	SBT-BH-4008	SBT-GW-4008	29 Mar 2023	-	225,000	-	5	-	<0.1	-	<1	-	<1	1,950	1,130	-	<1	-	<0.1	-	<1
Southern Tunnels	SMGW-BH-D205		27 Nov 2020	-	513,000	3	2	<0.1	<0.1	4	2	4	<1	3,180	2,330	1	<1	<0.1	<0.1	1	<1
Southern Tunnels	SMGW-BH-D205		17 Feb 2021	-	575,000	2	2	<0.1	<0.1	2	1	<1	<1	2,630	1,700	<1	<1	<0.1	<0.1	2	<1
Southern Tunnels	SMGW-BH-D205		26 May 2021	-	758,000	3	2	0.1	<0.1	3	2	8	2	2,460	1,000	2	<1	<0.1	<0.1	3	1
Southern Tunnels	SMGW-BH-D206		17 May 2021	-	580,000	<1	<1	<0.1	<0.1	<1	<1	2	1	<50	<50	<1	<1	<0.1	<0.1	33	33
WSI	SMGW-BH-C001S	BH-C001S	06 Sep 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	SMGW-BH-C001S	BH-C001S	06 Sep 2019	-	451,000	-	1	-	<0.1	-	<1	-	<1	-	630	-	<1	-	<0.1	-	6
WSI	SMGW-BH-C001S		27 Aug 2020	-	72,000	2	<1	<0.1	<0.1	3	<1	6	2	3,410	230	3	<1	<0.1	<0.1	3	2
WSI	SMGW-BH-C002	BH-C002	06 Sep 2019	-	174,000	-	<1	-	<0.1	-	<1	-	<1	-	<50	-	<1	-	<0.1	-	<1
WSI	SMGW-BH-C002		27 Aug 2020	-	4,000	5	4	<0.1	<0.1	2	<1	2	2	2,530	720	7	5	<0.1	<0.1	3	2
WSI	SMGW-BH-C201		03 Sep 2020	-	547,000	3	<1	0.2	<0.1	26	<1	86	<1	7,700	2,460	11	<1	<0.1	<0.1	7	<1
WSI	SMGW-BH-C201S		27 Aug 2020	-	1,110,000	1	1	0.1	0.1	1	1	1	1	<50	<50	1	1	0.1	0.1	4	4
WSI	SMGW-BH-C205S		27 Aug 2020	-	818,000	<1	<1	0.2	0.2	<1	<1	<2	1	60	<50	<1	<1	<0.1	<0.1	11	9
WSI	SMGW-BH-C206		08 Sep 2020	-	609,000	<1	<1	<0.1	<0.1	<1	<1	2	1	230	-	<1	<1	<0.1	<0.1	2	2
WSI	SMGW-BH-C208		17 May 2021	-	116,000	8	3	3.3	<0.1	4	<1	125	<1	860	110	3	<1	<0.1	<0.1	24	2
WSI	SMGW-BH-C209		07 Oct 2020	-	132,000	<1	<1	<0.1	<0.1	6	3	<1	<1	1,700	590	<1	<1	<0.1	<0.1	1	<1
WSI	SMGW-BH-C209		02 Dec 2020	-	126,000	1	<1	<0.1	<0.1	3	<1	1	<1	1,670	1,020	<1	<1	<0.1	<0.1	<1	<1
WSI	SMGW-BH-C301		15 Apr 2021	400,000	-	21	<1	<0.2	<0.2	-	<1	-	<1	-	<50	54	<1	-	<0.1	50	14
WSI	SMGW-BH-C302		15 Apr 2021	1,200,000	-	4	<1	<0.2	<0.2	8	<1	-	-	-	570	7	<1	<0.1	<0.1	8	3
WSI	SMGW-BH-C302		15 Apr 2021	1,000,000	-	3	<1	<0.2	<0.2	8	<1	-	-	-	820	6	<1	<0.1	<0.1	8	4
WSI	SMGW-BH-C302		12 May 2021	1,000,000	-	<1	<1	<0.2	<0.2	<1	<1	-	1	220	<50	<1	<1	<0.1	<0.1	10	10
WSI	SMGW-BH-C302		12 May 2021	1,100,000	-	<1	<1	<0.2	<0.2	2	<1	-	1	-	<50	-	<1	<0.1	<0.1	9	8
WSI	SMGW-BH-C304		20 Apr 2021	510,000	-	3	1	<0.2	<0.2	2	<1	-	1	-	<50	-	<1	<0.1	<0.1	13	12
WSI	SMGW-BH-C305		20 Apr 2021	1,100,000	-	3	1	<0.2	<0.2	<1	<1	-	<1	330	<50	<1	<1	<0.1	<0.1	11	8
WSI	SMGW-BH-C305		12 May 2021	860,000	-	<1	<1	<0.2	<0.2	<1	<1	1	<1	<50	<50	<1	<1	<0.1	<0.1	9	8
WSI	SMGW-BH-C320		29 Apr 2021	840,000	-	1	1	<0.2	<0.2	1	<1	<1	<1	260	<50	<1	<1	<0.01	-	8	6
WSI	SMGW-BH-C320	SMGW-BH-C320_071222	07 Dec 2022	-	723,000	-	<1	-	<0.1	-	<1	-	<1	1,180	490	-	<1	-	<0.1	-	5
WSI	SMGW-BH-C321		29 Apr 2021	120,000	-	2	1	<0.2	<0.2	<1	<1	1	<1	-	600	<1	<1	<0.01	-	3	2
WSI	SMGW-BH-C321		29 Apr 2021	120,000	-	2	2	<0.2	<0.2	<1	<1	1	<1	-	550	<1	<1	<0.01	-	3	2
WSI	SMGW-BH-C321		13 May 2021	130,000	-	-	1	-	<0.2	-	2	-	1	-	-	-	<1	-	<0.1	-	3
WSI	SMGW-BH-C321	SMGW-BH-C321_071222	07 Dec 2022	-	92,000	-	<1	-	<0.1	-	<1	-	<1	12,600	<50	-	<1	-	<0.1	-	<1
WSI	SMGW-BH-C322		13 May 2021	1,200,000	-	-	3	-	-	8	-	-	-	-	-	-	-	-	<0.1	-	12
WSI	SMGW-BH-C322		13 May 2021	1,100,000	-	-	2	-	-	4	-	-	1	-	140	-	<1	-	<0.1	-	42
WSI	SMGW-BH-C324	SMGW-BH-C324_071222	07 Dec 2022	-	701,000	-	<1	-	<0.1	-	<1	-	<1	1,050	280	-	<1	-	<0.1	-	3
WSI	SMGW-BH-C324	SMGW-BH-C324	19 Jan 2023	-	668,000	-	<1	-	<0.1	-	<1	-	<1	1,830	140	-	<1	-	<0.1	-	6
WSI	SMGW-BH-C325		29 Apr 2021	200,000	-	4	3	<0.2	<0.2	<1	<1	-	<1	-	-	<1	<1	0.03	-	43	44
WSI	SMGW-BH-C330	SMGW-BH-C330_071222	07 Dec 2022	-	624,000	-	2	-	0.4	-	2	-	30	7,420	330	-	2	-	<0.1	-	239
WSI	SMGW-BH-C330	SMGW-BH-C330	19 Jan 2023	-	708,000	-	<1	-	0.6	-	1	-	24	1,060	<50	-	2	-	<0.1	-	314
WSI	SMGW-BH-C331		29 Apr 2021	610,000	-	-	<10	-	-	-	<10	-	-	-	<500	-	<10	-	-	-	<10
WSI	SMGW-BH-C332	SMGW-BH-C332_071222	07 Dec 2022	-	984,000	-	<1	-	<0.1	-	<1	-	<1	460	<50	-	<1	-	<0.1	-	2
WSI	SMGW-BH-C332	SMGW-BH-C332	19 Jan 2023	-	985,000	-	<10	-	<1.0	-	<10	-	<10	1,590	<100	-	<10	-	<0.1	-	<10
WSI	SMGW-BH-C340		20 Apr 2021	1,500,000	-	-	<1	-	-	2	-	-	<1	-	850	-	-	-	<0.1	-	150
WSI	SMGW-BH-C341		20 Apr 2021	150,000	-	-	<1	-	<0.2	-	2	-	<1	-	880	-	<1	-	-	-	14
WSI	SMGW-BH-C342		20 Apr 2021	150,000	-	-	<1	-	<0.2	-	2	-	<1	-	-	-	7	-	<0.1	-	5
WSI	SMGW-BH-C343		20 Apr 2021	1,300,000	-	-	<1	-	<0.2	-	<1										

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

WSI	SMGW-BH-C352		21 Apr 2021	1,300,000	-	-	2	-	<0.2	-	1	-	-	-	70	-	<1	-	<0.1	-	-
WSI	SMGW-BH-C352		21 Apr 2021	1,500,000	-	-	2	-	<0.2	-	2	-	1	-	<50	-	<1	-	<0.1	-	-
WSI	WSA GW04		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		29 Mar 2017	-	-	-	4	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW04		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		06 Oct 2017	-	-	-	5	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	67
WSI	WSA GW04		18 Dec 2017	-	-	-	5	-	<0.2	-	<1	-	33	-	-	-	<1	-	<0.1	-	120
WSI	WSA GW04		19 Dec 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		18 Apr 2018	-	-	-	4	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	110
WSI	WSA GW04		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		04 Jul 2018	-	-	-	3	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	93
WSI	WSA GW04		06 Sep 2018	-	-	-	3	-	<0.2	-	<1	-	5	-	-	-	<1	-	<0.1	-	10
WSI	WSA GW04		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		12 Dec 2018	-	-	-	4	-	<0.2	-	<1	-	8	-	-	-	1	-	<0.1	-	7
WSI	WSA GW04		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW04		04 Apr 2019	-	-	-	4	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	16
WSI	WSA GW04		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		29 Mar 2017	-	-	-	6	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW05		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		06 Oct 2017	-	-	-	3	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	49
WSI	WSA GW05		18 Dec 2017	-	-	-	2	-	<0.2	-	<1	-	32	-	-	-	1	-	<0.1	-	55
WSI	WSA GW05		19 Dec 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		18 Apr 2018	-	-	-	2	-	<0.2	-	<1	-	14	-	-	-	2	-	<0.1	-	15
WSI	WSA GW05		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		04 Jul 2018	-	-	-	2	-	<0.2	-	<1	-	37	-	-	-	3	-	<0.1	-	14
WSI	WSA GW05		06 Sep 2018	-	-	-	2	-	<0.2	-	<1	-	24	-	-	-	2	-	<0.1	-	15
WSI	WSA GW05		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	19	-	-	-	2	-	<0.1	-	13
WSI	WSA GW05		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05		04 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	9
WSI	WSA GW05		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW05	WSA-GW05	23 Jun 2023	-	969,000	-	<1	-	<0.1	-	<1	-	<1	2,500	2,020	-	<1	-	<0.1	-	11
WSI	WSA GW06		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		05 Apr 2017	-	-	-	3	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW06		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		06 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	260
WSI	WSA GW06		18 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	12
WSI	WSA GW06		19 Dec 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		18 Apr 2018	-	-	-	1	-	<0.2	-	<1	-	34	-	-	-	3	-	<0.1	-	25
WSI	WSA GW06		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		04 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	10
WSI	WSA GW06		06 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW06		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		12 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	3	-	-	-	<1	-	<0.1	-	10
WSI	WSA GW06		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW06		04 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW06		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		28 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW07		29 Mar 2017	-	-	-	<1	-	<0.2	-	2	-	<1	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW07		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		06 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	57
WSI	WSA GW07		18 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW07		19 Dec 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		18 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	17	-	-	-	3	-	<0.1	-	<1
WSI	WSA GW07		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		04 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	24	-	-	-	2	-	<0.1	-	12
WSI	WSA GW07		06 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	27	-	-	-	2	-	<0.1	-	6
WSI	WSA GW07		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	16	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW07		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW07		04 Apr 2019	-	-	-	<1	-	0.2	-	<1	-	31	-	-	-	2	-	<0.1	-	10
WSI	WSA GW07		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW08		28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW08		29 Mar 2017	-	-	-	<1	-	<0.2	-	2	-	<1	-	-	-	<1				

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

WSI	WSA GW08	19 Dec 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW08	17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW08	18 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	1	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW08	03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW08	04 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW08	06 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	4	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW08	07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW08	13 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	0.3	-	5
WSI	WSA GW08	14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW08	04 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	0.1	-	2
WSI	WSA GW08	04 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	0.2	-	<1
WSI	WSA GW08	05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	28 Mar 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	29 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW14	14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	05 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW14	06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	19 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	71	-	-	-	2	-	<0.1	-	170
WSI	WSA GW14	03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	05 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	13	-	-	-	<1	-	<0.1	-	13
WSI	WSA GW14	06 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW14	12 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW14	03 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW16	28 Mar 2017	-	-	-	16	-	<0.2	-	2	-	<1	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW16	14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW16	15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW16	05 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	9
WSI	WSA GW16	06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW16	17 Apr 2018	-	-	-	3	-	<0.2	-	<1	-	8	-	-	-	1	-	<0.1	-	5
WSI	WSA GW16	03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW16	05 Jul 2018	-	-	-	2	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	30
WSI	WSA GW16	07 Sep 2018	-	-	-	2	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	25
WSI	WSA GW16	12 Dec 2018	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	6
WSI	WSA GW16	03 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	18
WSI	WSA GW16	05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	28 Mar 2017	-	-	-	3	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	10
WSI	WSA GW17	14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	04 Oct 2017	-	-	-	4	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	14
WSI	WSA GW17	06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	19 Dec 2017	-	-	-	1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW17	17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	19 Apr 2018	-	-	-	3	-	<0.2	-	<1	-	10	-	-	-	<1	-	<0.1	-	120
WSI	WSA GW17	03 Jul 2018	-	-	-	3	-	<0.2	-	<1	-	3	-	-	-	<1	-	<0.1	-	81
WSI	WSA GW17	05 Sep 2018	-	-	-	1	-	<0.2	-	<1	-	24	-	-	-	2	-	<0.1	-	20
WSI	WSA GW17	07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	13 Dec 2018	-	-	-	3	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	6
WSI	WSA GW17	14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW17	03 Apr 2019	-	-	-	2	-	<0.2	-	<1	-	9	-	-	-	<1	-	<0.1	-	9
WSI	WSA GW17	05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	28 Mar 2017	-	-	-	6	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW18	14 Jun 2017	-	-	-	12	-	<0.2	-	2	-	<1	-	-	-	<1	-	<0.1	-	18
WSI	WSA GW18	15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	04 Oct 2017	-	-	-	23	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	14
WSI	WSA GW18	06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	19 Dec 2017	-	-	-	11	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW18	17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	19 Apr 2018	-	-	-	18	-	<0.2	-	<1	-	10	-	-	-	<1	-	<0.1	-	8
WSI	WSA GW18	03 Jul 2018	-	-	-	15	-	<0.2	-	<1	-	5	-	-	-	<1	-	<0.1	-	7
WSI	WSA GW18	05 Sep 2018	-	-	-	4	-	<0.2	-	<1	-	<20	-	-	-	<1	-	<0.1	-	10
WSI	WSA GW18	07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	13 Dec 2018	-	-	-	9	-	<0.2	-	<1	-	12	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW18	14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW18	03 Apr 2019	-	-	-	11	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	8
WSI	WSA GW18	05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW19	28 Mar 2017	-	-	-	1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	150
WSI	WSA GW19	14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW19	15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW19	04 Oct 2017	-	-	-	<1	-	0.5	-	<1	-	9	-	-	-	<1	-	<0.1	-	200
WSI	WSA GW19	06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSI	WSA GW19	17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

WSI	WSA GW19		19 Apr 2018	-	-	-	1	-	0.2	-	<1	-	17	-	-	-	2	-	<0.1	-	190
WSI	WSA GW19		03 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	23	-	-	-	2	-	<0.1	-	120
WSI	WSA GW19		07 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	87	-	-	-	8	-	<0.1	-	110
WSI	WSA GW19		14 Dec 2018	-	-	-	<1	-	0.3	-	<1	-	13	-	-	-	1	-	<0.1	-	190
WSI	WSA GW20		28 Mar 2017	-	-	-	<1	-	<0.2	-	8	-	<1	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW20		14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW20		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW20		04 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	2	-	-	-	<1	-	0.1	-	6
WSI	WSA GW20		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW20		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	3	-	-	-	<1	-	<0.1	-	3
WSI	WSA GW20		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW20		18 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	43	-	-	-	3	-	<0.1	-	61
WSI	WSA GW20		03 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	15	-	-	-	1	-	<0.1	-	14
WSI	WSA GW20		05 Sep 2018	-	-	-	2	-	<0.2	-	<1	-	20	-	-	-	1	-	<0.1	-	25
WSI	WSA GW20		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW20		14 Dec 2018	-	-	-	4	-	<0.2	-	<1	-	22	-	-	-	2	-	<0.1	-	19
WSI	WSA GW20		03 Apr 2019	-	-	-	5	-	<0.2	-	<1	-	10	-	-	-	<1	-	<0.1	-	15
WSI	WSA GW20		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		28 Mar 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1
WSI	WSA GW21		14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		04 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW21		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1
WSI	WSA GW21		21 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW21		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		18 Apr 2018	-	-	-	<1	-	<0.2	-	2	-	22	-	-	-	2	-	<0.1	-	7
WSI	WSA GW21		03 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	23	-	-	-	<2	-	<0.1	-	<5
WSI	WSA GW21		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	21	-	-	-	2	-	<0.1	-	6
WSI	WSA GW21		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW21		14 Dec 2018	-	-	-	1	-	<0.2	-	<1	-	18	-	-	-	2	-	<0.1	-	9
WSI	WSA GW21		03 Apr 2019	-	-	-	1	-	<0.2	-	<1	-	26	-	-	-	2	-	<0.1	-	8
WSI	WSA GW21		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		28 Mar 2017	-	-	-	11	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	2
WSI	WSA GW22		14 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		15 Jun 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		05 Oct 2017	-	-	-	2	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	20
WSI	WSA GW22		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		19 Dec 2017	-	-	-	4	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	<1
WSI	WSA GW22		17 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	3	-	-	-	<1	-	<0.1	-	6
WSI	WSA GW22		03 Jul 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		05 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW22		07 Sep 2018	-	-	-	2	-	<0.2	-	<1	-	6	-	-	-	<1	-	<0.1	-	6
WSI	WSA GW22		12 Dec 2018	-	-	-	3	-	<0.2	-	<1	-	4	-	-	-	<1	-	<0.1	-	7
WSI	WSA GW22		13 Dec 2018	-	-	-	2	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	7
WSI	WSA GW22		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW22		05 Apr 2019	-	-	-	1	-	<0.2	-	<1	-	2	-	-	-	<1	-	<0.1	-	9
WSI	WSA GW23		28 Mar 2017	-	-	-	<1	-	<0.2	-	2	-	<1	-	-	-	<1	-	<0.1	-	<1
WSI	WSA GW23		04 Oct 2017	-	-	-	<1	-	<0.2	-	<1	-	4	-	-	-	<1	-	<0.1	-	7
WSI	WSA GW23		06 Oct 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW23		19 Dec 2017	-	-	-	<1	-	<0.2	-	<1	-	<1	-	-	-	<1	-	<0.1	-	1
WSI	WSA GW23		17 Apr 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW23		19 Apr 2018	-	-	-	<1	-	<0.2	-	<1	-	73	-	-	-	<3	-	<0.2	-	11
WSI	WSA GW23		03 Jul 2018	-	-	-	<1	-	<0.2	-	<1	-	22	-	-	-	2	-	<0.1	-	6
WSI	WSA GW23		05 Sep 2018	-	-	-	<1	-	<0.2	-	<1	-	39	-	-	-	2	-	<0.1	-	7
WSI	WSA GW23		07 Sep 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW23		13 Dec 2018	-	-	-	<1	-	<0.2	-	1	-	16	-	-	-	<1	-	<0.1	-	5
WSI	WSA GW23		14 Dec 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WSI	WSA GW23		03 Apr 2019	-	-	-	<1	-	<0.2	-	<1	-	10	-	-	-	<1	-	<0.1	-	4
WSI	WSA GW23		05 Apr 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Metals																								
Zinc	Zinc (filtered)	Molybdenum	Molybdenum (filtered)	Selenium	Selenium (filtered)	Chromium (hexavalent) (filtered)	Tin (filtered)	Aluminium	Aluminium (filtered)	Arsenic III	Barium	Barium (filtered)	Beryllium	Beryllium (filtered)	Boron	Boron (filtered)	Chromium (Trivalent) (filtered)	Cobalt	Cobalt (filtered)	Manganese	Manganese (filtered)	Strontium	Strontium (filtered)	Vanadium
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
5	5			10	10	10		10	10								10	1	1	1	1			
8	8			11	11	1		55	55	24					370	370		1		1,900	1,900			
5	5			5	5			100	100				4	4										
15	15					1		80	80															

-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	<10	-	4,090	40	-	-	-	-	-	-	-	<10	6	2	1,550	1,160	-	-
-	<5	-	-	-	-	<10	-	7,230	<10	-	-	-	-	-	-	-	<10	5	2	935	844	-	-
-	18	-	-	-	-	-	-	8,940	<10	-	-	-	-	-	-	-	-	12	6	1,970	1,840	-	-
-	12	-	-	-	-	<1,000	-	16,500	<10	-	-	-	-	-	-	-	<1,000	19	4	2,250	1,950	-	-
-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	13	-	-	-	-	<10	-	220	<10	-	-	-	-	-	-	-	<10	7	7	1,210	1,380	-	-
-	26	-	-	-	-	-	-	550	<10	-	-	-	-	-	-	-	-	4	2	576	328	-	-
-	10	-	-	-	-	<10	-	1,400	<10	-	-	-	-	-	-	-	<10	4	<1	471	182	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	9,830	<10	-	-	-	-	-	-	-	-	8	<1	486	<1	-	-
-	11	-	-	-	-	-	-	1,090	30	-	-	-	-	-	-	-	-	<1	<1	66	20	-	-
-	8	-	-	-	-	-	-	1,020	350	-	-	-	-	-	-	-	-	<1	<1	117	17	-	-
916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,830	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	<10	-	30	<10	-	-	-	-	-	-	-	<10	3	4	187	174	-	-
-	<5	-	-	-	-	-	-	1,110	<10	-	-	-	-	-	-	-	-	4	4	243	220	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	<10	-	1,890	<10	-	-	-	-	-	-	-	<10	5	5	177	166	-	-
-	9	-	-	-	-	-	-	1,060	<10	-	-	-	-	-	-	-	-	6	6	225	205	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	<10	-	7,040	<10	-	-	-	-	-	-	-	<10	8	2	299	97	-	-
-	<5	-	-	-	-	-	-	380	<10	-	-	-	-	-	-	-	-	3	3	114	119	-	-
-	<5	-	-	-	-	<10	-	1,010	<10	-	-	-	-	-	-	-	<10	4	2	1,180	1,050	-	-
-	10	-	-	-	-	-	-	32,500	<10	-	-	-	-	-	-	-	-	75	3	11,400	1,230	-	-
-	<5	-	-	-	-	<10	-	13,500	<10	-	-	-	-	-	-	-	<10	29	3	4,640	1,190	-	-
-	6	-	-	-	-	<10	-	13,000	<10	-	-	-	-	-	-	-	<10	25	3	4,940	1,170	-	-
-	10	-	-	-	-	-	-	7,370	<10	-	-	-	-	-	-	-	-	21	14	1,720	1,090	-	-
-	10	-	-	-	-	-	-	5,450	240	-	-	-	-	-	-	-	-	16	10	2,560	756	-	-
6	<5	6	4	<10	<10	-	-	90	<10	-	248	225	<1	<1	<50	<50	-	2	2	233	228	12,600	11,500
<5	<5	6	4	<10	<10	-	-	30	<10	-	198	175	<1	<1	<50	<50	-	2	1	230	209	11,500	10,800
<5	<5	6	5	<10	<10	-	-	20	<10	-	195	178	<1	<1	50	<50	-	2	1	229	218	11,400	10,500

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

15	OFFEY5	6	5	<10	<10	-	-	260	10	-	505	452	<1	<1	<50	70	-	17	4	292	248	12,000	11,300	<10
<5	<5	4	3	<10	<10	-	-	320	<10	-	431	485	<1	<1	50	<50	-	6	6	181	186	13,900	12,400	<10
<5	<5	4	3	<10	<10	-	-	220	<10	-	525	544	<1	<1	50	<50	-	8	8	120	122	14,400	12,800	<10
<5	<5	4	3	<10	<10	-	-	280	<10	-	520	548	<1	<1	50	<50	-	8	8	121	124	14,100	12,700	<10
34	24	4	3	<10	<10	-	-	550	<10	-	80	65	<1	<1	<50	<50	-	13	8	141	96	15,700	14,600	<10
57	21	5	3	<10	<10	-	-	2,640	<10	-	148	65	<1	<1	<50	<50	-	28	16	411	185	16,700	14,800	<10
26	<5	4	4	<10	<10	-	-	360	<10	-	101	95	<1	<1	<50	<50	-	47	47	837	774	16,800	16,900	<10
5	<5	1	<1	<10	<10	-	-	140	<10	-	82	80	<1	<1	<50	<50	-	18	18	919	904	17,400	15,700	<10
9	<5	2	1	<10	<10	-	-	250	<10	-	77	76	<1	<1	<50	<50	-	14	13	792	872	18,700	19,200	<10
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	6	-	-	-	-	<10	-	340	<10	-	-	-	-	-	-	-	<10	6	6	2,630	2,390	-	-	-
-	<5	-	-	-	-	-	-	4,530	<10	-	-	-	-	-	-	-	-	13	6	3,740	2,600	-	-	-
13	<5	1	<1	<10	<10	-	-	290	20	-	197	195	<1	<1	70	<50	-	<1	<1	62	55	9,490	8,740	<10
<5	<5	<1	<1	<10	<10	-	-	100	<10	-	169	164	<1	<1	<50	50	-	<1	<1	50	44	9,150	9,230	<10
<5	<5	1	<1	<10	<10	-	-	110	<10	-	174	167	<1	<1	<50	50	16	<1	<1	50	44	9,420	9,340	<10
7	<5	<1	<1	<10	<10	-	-	160	<10	-	322	314	<1	<1	<50	<50	-	<1	<1	73	70	8,920	9,140	<10
<5	<5	<1	<1	<10	<10	-	-	190	<10	-	326	320	<1	<1	<50	<50	-	<1	<1	76	70	8,970	9,140	<10
73	59	4	3	<10	<10	-	-	3,020	<10	-	98	75	<1	<1	80	90	-	984	1,020	5,640	5,450	2,530	2,590	<10
<5	14	<5	15	<1	<1	-	-	<50	<50	-	30	290	<1	<1	80	90	-	<1	2	9	100	560	<5	<5
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	89	-	-	-	-
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	89	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	430	-	-	-	-
25	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	45	45	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	1,000	1,000	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	136	-	-	-
-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	134	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	<10	-	2,300	<10	-	-	-	-	-	-	-	<10	11	6	269	216	-	-	-
-	<50	-	-	-	-	<10	-	2,580	<100	-	-	-	-	-	-	-	<10	<10	<10	279	256	-	-	-
-	<50	-	-	-	-	<10	-	2,030	<100	-	-	-	-	-	-	-	<10	<10	<10	353	259	-	-	-
-	79	-	-	-	-	<10	-	4,590	<10	-	-	-	-	-	-	-	<10	79	77	10,900	12,400	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	82	-	-	-	-	-	-	8,200	<100	-	-	-	-	-	-	-	-	68	67	9,980	10,800	-	-	-
-	<50	-	-	-	-	<10	-	2,410	<100	-	-	-	-	-	-	-	<10	52	56	7,250	7,970	-	-	-
-	7	-	-	-	-	<10	-	6,450	<10	-	-	-	-	-	-	-	<10	28	17	4,020	3,720	-	-	-
-	<50	-	-	-	-	-	-	41,800	<100	-	-	-	-	-	-	-	-	53	14	3,700	3,080	-	-	-
-	<100	-	-	-	-	<10	-	1,350	<200	-	-	-	-	-	-	-	<20	18	<20	3,710	3,300	-	-	-
-	6	-	-	-	-	<10	-	180	30	-	-	-	-	-	-	-	20	<1	1	47	41	-	-	-
-	10	-	-	-	-	<10	-	4,820	40	-	-	-	-	-	-	-	20	3	<1	128	70	-	-	-
-	<5	-	-	-	-	<10	-	3,780	20	-	-	-	-	-	-	-	10	4	1	244	101	-	-	-
-	19	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	<10	-	11	-	1,890	-	-	-
-	19	-	-	-	-	-	-	4,610	200	-	-	-	-	-	-	-	-	31	10	1,360	985	-	-	-
-	23	-	-	-	-	<10	-	108,000	740	-	-	-	-	-	-	-	<10	156	8	2,760	739	-	-	-
-	6	-	-	-	-	<10	-	50,400	<10	-	-	-	-	-	-	-	<10	92	2	3,030	101	-	-	-
-	<50	-	-	-	-	-	-	390	<100	-	-	-	-	-	-	-	<10	<10	<10	120	53	-	-	-
-	<50	-	-	-	-	<10	-	3,360	<100	-	-	-	-	-	-	-	<10	<10	<10	325	57	-	-	-
-	17	-	-	-	-	<10	-	1,800	<10	-	-	-	-	-	-	-	<10	3	1	109	109	-	-	-
-	<50	-	-	-	-	<10	-	600	<100	-	-	-	-	-	-	-	<10	<10	<10	83	67	-	-	-
-	<50	-	-	-	-	<10	-	3,750	<100	-	-	-	-	-	-	-	<10	<10	<10	178	44	-	-	-
-	<5	-	-	-	-	<10	-	10,700	<10	-	-	-	-	-	-	-	<10	19	6	872	537	-	-	-
-	<50	-	-	-	-	-	-	1,000	<100	-	-	-	-	-	-	-	-	<10	<10	276	239	-	-	-
-	<50	-	-	-	-	-	-	10,800	<100	-	-	-	-	-	-	-	-	13	<10	539	567	-	-	-
-	<50	-	-	-	-	<10	-	7,070	<100	-	-	-	-	-	-	-	<10	<10	<10	410	230	-	-	-
-	<5	-	-	-	-	-	-	2,270	<10	-	-	-	-	-	-	-	-	19	4	2,590	1,230	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	2,750	<10	-	-	-	-	-	-	-	-	24	5	2,980	1,430	-	-	-
39	-	<5	<5	<1	<1	-	<5	70	<50	-	150	130	<1	<1	<500	<500	-	2	2	260	210	27,000	24,000	<5
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	8	-	-	-	-	<10	-	520	<10	-	-	-	-	-	-	-	<10	7	6	184	174	-	-	-
-	7	-	-	-	-	-	-	390	<10	-	-	-	-	-	-	-	-	8	6	202	191	-	-	-
43	<5	-	-	-	-	-	-	2,980	460	-	-	-	-	-	-	-	-	1	<1	44	<1	-	-	-
-	21	-	-	-	-	<10	-	7,970	600	-	-	-	-	-	-	-	<10	5	<1	163	6	-	-	-
-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	<5	-	-	-	-	-	-	890	<10	-	-	-	-	-	-	-	-	12	11	1,810	1,680	-	-	-
-	<5	-	-	-	-	-	-	880	60	-	-	-	-	-	-	-	-	11	8	1,880	1,390	-	-	-
-	15	-	-	-	-	-	-	180	<10	-	-	-	-	-	-	-	-	19	16	502	349	-	-	-
-	8	-	-	-	-	-	-	5,650	<10	-	-	-	-	-	-	-	-	17	14	672	334	-	-	-
-	16	-	-	-	-	-	-	6,680	<10	-	-	-	-	-	-	-	-	26	9	1,330	232	-	-	-
-	15	-	-	-	-	-	-	1,370	<10	-	-	-	-	-	-	-	-	13	10	638	225	-	-	-
39	-	<5	<5	<1	<1	-	<5	70	<50	-	150	130	<1	<1	<500	<500	-	2	2	210	210	27,000	24,000	<5
39	-	<5	<5	<1	<1	-	<5	70	<50	-	150	130	<1	<1	<500	<500	-	2	2	260	210	27,000	24,000	<5
27	25	<5	<5	<1	<1	-	-	<50	<50	-	60	60	<1	<1	<500	<500	-	2	1	-	-	27,000	26,000	<5
43	40	<5	<5	-	<1	-	-	-	<50	-	60	50	<1	<1	80	80	-	<1	<1	230	190	30,000	27,000	<5
24	28	<5	<5	<1	<1	-	-	-	<50	-	30	30	<1	<1	100	90	-	3	3	320	290	14,000	14,000	<5
13	-	<5	<5	<1	<1	-	-	-	<50	-	60	30	<1	<1	-	-	-	7	3	780	400	17,000	15,000	<5
14	-	<5	<5	2	2	-	-	-	<50	-	30	30	<1	<1	80	90	-	3	4	870	1,600	17,000	16,000	<5
14	-	<5	<5	1	<1	-	-	80	<50	-	40	40	<1	<1	70	90	-	3	4	840	1,600	16,000	16,000	<5
71	17	9	8	<1	<1	-	-	11,000	80	-	320	240	<1	<1	<50	<50	-	11	4	1,200	720	9,000	9,000	24
36	12	<5	<5	2	1	-	-	-	<50	-	90	70	<1	<1	70	70	-	5	3	760	700	13,000	11,000	<5
35	10	<5	<5	1	<1	-	-	80	<50	-	90	70	<1	<1	80	70	-	5	3	750	690	11,000	10,000	<5
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	360	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	360	-	-	-
<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	27	-	-	-	-	-	-	40	<10	-	-	-	-	-	-	-	-	1	1	212	191	-	-	-
-	16	-	-	-	-	-	-	40	<10	-	-	-	-	-	-	-	-	<1	1	235	213	-	-	-
-	37	-	-	-	-	-	-	40	10	-	-	-	-	-	-	-	-	<1	<1	225	214	-	-	-
13	<5	2	1	<10	<10	-	-	640	<10	-	153	141	<1	<1	60	90	-	6	6	592	562	19,100	17,600	<10
14	<5	<1	<1	<10	<10	-	-	170	<10	-	136	124	<1	<1	60	50	-	4	2	836	828	17,900	17,200	<10
22	12	3	<1	<10	<10	-	-	630	80	-	118	98	<1	<1	60	50	-	3	1	1,230	1,170	15,800	15,500	<10
26	22	3	2	<10	<10	-	-	<10	<10	-	1,280	1,250	<1	<1	<50	60	-	28	28	484	464	21,000	19,100	<10
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	9	-	-	-	<10	-	-	-	<10	-	-	-	-	-	-	-	-	-	26	-	4,550	-	-	-
42	14	1	<1	<10	<10	-	-	2,910	220	-	98	87	<1	<1	<50	<50	-	4	2	409	450	804	896	<10
-	5	-	-	-	<10	-	-	-	<10	-	-	-	-	-	-	-	-	-	<1	-	1	-	-	-
156	63	<1	<1	<10	<10	-	-	1,470	160	-	169	132	<1	<1	<50	<50	-	1	<1	33	11	102	98	<10
113	<5	5	3	<10	<10	-	-	5,030	<10	-	5,220	1,870	<1	<1	70	70	-	6	3	620	384	17,700	15,800	20
5	7	1	1	10	10	-	-	20	10	-	51	44	1	1	50	50	-	4	3	1,450	1,320	10,800	10,200	10
14	17	1	<1	<10	<10	-	-	20	<10	-	140	125	<1	<1	<50	<50	-	8	9	1,160	1,110	5,480	5,400	<10
12	7	6	5	<10	<10	-	-	70	<10	-	83	76	<1	<1	<50	<50	-	2	2	210	194	10,800	10,400	<10
13	<5	7	6	<10	<10	-	-	640	<10	-	2,750	2,210	3	<1	<50	<50	-	5	<1	156	100	21,800	20,700	<10
32	<5	2	<1	<10	<10	-	-	890	60	-	1,060	712	<1	<1	<50	<50	-	2	<1	516	474	11,700	12,200	<10
16	5	1	<1	<10	<10	-	-	390	<10	-	20,500	10,700	<1	<1	70	70	-	1	<1	223	197	16,800	14,800	<10
130	9	<5	<5	3	1	-	-	-	<50	-	370	70	3	<1	80	100	-	57	9	1,600	550	3,000	3,200	100
40	19	<5	<5	<1	<1	-	-	-	<50	-	110	60	<1	<1	60	80	-	10	5	1,900	1,900	4,500	4,500	14
41	20	<5	<5	<1	<1	-	-	-	<50	-	100	60	<1	<1	50	60	-	9	5	1,900	1,900	4,500	4,600	12
15	15	<5	<5	<1	<1	-	-	90	<50	-	60	60	<1	<1	<50	<50	-	5	5	1,600	1,500	4,800	5,100	<5
15	10	<5	<5	1	<1	-	-	-	<50	-	60	60	<1	<1	<50	<50	-	5	4	1,600	1,500	4,500	5,100	<5
17	11	<5	<5	<1	1	-	-	-	<50	-	100	90	<1	<1	<50	<50	-	5	5	440	450	2,700	2,700	9
15	8	<5	6	<1	2	-	-	-	<50	-	70	60	<1	<1	<50	<50	-	19	16	1,200	1,100	5,000	4,600	10
14	12	<5	<5	1	<1	-	-	<50	<50	-	50	60	<1	<1	<50	<50	-	30	28	930	870	3,800	4,200	<5
26	14	<5	<5	1	2	-	-	-	<50	-	100	80	<1	<1	<50	<50	-	3	2	300	230	7,500	6,800	<5
-	11	-	-	-	-	<10	-	190	<10	-	-	-	-	-	-	<10	6	4	1,310	1,060	-	-	-	
-	<5	<5	<5	<1	<1	-	-	-	<50	-	130	130	<1	<1	<50	<50	-	6	6	2,100	2,000	1,700	1,800	<5
8	<5	<5	<5	<1	<1	-	-	-	<50	-	140	100	<1	<1	<50	<50	-	7	5	2,300	1,700	1,900	1,600	<5
-	9	-	<5	-	<1	-	-	-	-	-	130	-	-	<1	-	<50	-	-	8	-	2,700	-	1,700	-
-	<5	-	-	-	-	<10	-	310	<10	-	-	-	-	-	-	<10	21	<1	3,470	6	-	-	-	
-	44	-	<5	-	1	-	-	-	-	-	-	70	-	<1	-	<50	-	-	7	-	600	-	7,700	-
-	33	-	<5	-	1	-	-	-	-	-	-	70	-	<1	-	<50	-	-	18	-	2,200	-	7,300	-
-	22	-	-	-	-	<10	-	60	<10	-	-	-	-	-	-	<10	4	4	1,180	994	-	-	-	
-	50	-	-	-	-	<10	-	160	<10	-	-	-	-	-	-	<10	7	6	1,880	1,440	-	-	-	
41	19	<5	<5	3	2	-	-	-	<50	-	150	150	<1	<1	<50	<50	-	110	110	17,000	17,000	1,600	1,700	<5
-	1,090	-	-	-	-	<10	-	21,100	5,310	-	-	-	-	-	-	<10	476	350	1,560	723	-	-	-	
-	986	-	-	-	-	<10	-	3,200	3,150	-	-	-	-	-	-	<10	483	490	3,170	1,990	-	-	-	
-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	580	-	-	-
-	7	-	-	-	-	<10	-	340	<10	-	-	-	-	-	-	<10	6	2	144	62	-	-	-	
-	<50	-	-	-	-	<10	-	610	<100	-	-	-	-	-	-	<10	<10	<10	63	20	-	-	-	
-	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	-	23,000	-	-	-
-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	1,200	-	-	-
-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	420	-	-	-
-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	660	-	-	-
-	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	740	-	-	-
-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	700	-	-	-
-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	570	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	440	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	1,100	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	1,100	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<5	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
280	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
290	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
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26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
120	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
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58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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25	-	-	-	-	-	-	110	40	-	-	-	-	-	-	-	-	6	6	1,230	1,180	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
61	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
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40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
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76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
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38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
290	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
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33	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	
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130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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<5	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	

11 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	140	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	140	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	38	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	5	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	26	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<5	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	69	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	8	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	32	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[illegible]

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

[illegible]

15 of 108

16 of 108

17 of 108

18 of 108

[illegible]

[illegible]

21 of 108

22 of 108

23 of 108

[illegible]

[illegible]

26 of 108

27 of 108

28 of 108

29 of 108

30 of 108

[illegible]

32 of 108

33 of 108

34 of 108

35 of 108

36 of 108

[illegible]

[illegible]

39 of 108

40 of 108

41 of 108

42 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

																	Amino Aliphatics				Amino Aromatics			
esticides																								
Fenitrothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	N-Nitrosodiphenyl & Diphenylamine	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	0.5			0.5	2		2					0.5					2	2	2	2	2	4	1,000	1,000
0.2				0.05																				
				0.07																				

-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	500,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	750,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	701,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	804,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	872,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	936,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,150,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	858,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,110,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,050,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	808,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,220,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	839,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,050,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	-	-
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	1,190,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	953,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	931,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	-	-
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	40,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	65,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	-	-
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	-	-
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,120,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	1,150,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	1,060,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,020,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	928,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	1,080,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,070,000	<1,000
-	<2	-	-	<2	-	-	-	-	-	-	-	-	<2	-	-	-	-	<2	<2	<2	<2	<2	<4	745,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	771,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	779,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	1,000,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	955,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,000,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,010,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	978,000	<1,000
-	<0.5	-	-	<0.5	<2.0	-	<2.0	-	-	-	-	-	<0.5	-	-	-	-	<2	<2	<2	<2	<2	<4	991,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	830,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	803,000	<1,000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	789,000	<1,000

44 of 108

45 of 108

46 of 108

47 of 108

48 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Alkalinity			Anilines						Carbamates	Dioxins		Field									EP068A: OC Pesticides	NA		
Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness as CaCO3	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Methiocarb	234678-HxCDF I-TEF	1,2,3,4,6,7,8- Heptachlorodibenzofur an	Electrical Conductivity (Non Compensated)	DO (Field)	Redox Potential (Field)	Temp (Field)	ORP	TDS (Field)	Depth to groundwater (measured)	pH (Field)	PURGE VOLUME	Sum of DDD + DDE + DDT	Ammonium as N	Calcium	Calcium (filtered)
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	µg/L	mV	oC	CFU/mV	µg/L	m	-	L	mg/L	µg/L	mg/L	mg/L
1,000	1,000		4	4	2	2	2	2															1	1
								250																
																			5.5					
																			6.5-9					
																			6.5-8					

500,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	109
750,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	16,911	3,750	79.2	17.1	-	-	3.766	7.24	-	-	-	-	224
701,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201
804,000	<1,000	-	-	-	-	-	-	-	-	-	-	18,272	2,210	-17.3	20.3	-	-	3.683	6.57	-	-	-	-	260
872,000	<1,000	-	-	-	-	-	-	-	-	-	-	20,578	300	-26.2	24.6	-	-	3.825	7.21	-	-	-	-	295
936,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
1,150,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272
858,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300
1,110,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	263
1,050,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	218
808,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214
1,220,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	203
839,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175
1,050,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	198
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,190,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	26,421	2,620	101.3	17.7	-	-	3.573	7.17	-	-	-	-	322
953,000	<1,000	-	-	-	-	-	-	-	-	-	-	22,658	2,160	-30.1	20.9	-	-	3.501	6.63	-	-	-	-	226
931,000	<1,000	-	-	-	-	-	-	-	-	-	-	22,931	0	-29.3	22.4	-	-	3.305	7.32	-	-	-	-	239
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	19,576	860	-157.5	22.1	-	-	4.971	7.02	-	-	-	-	10
41,000	<1,000	-	-	-	-	-	-	-	-	-	-	703	2,270	-24.5	23.3	-	-	5.003	6.66	-	-	-	-	16
65,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	665	5,110	-50.1	22.8	-	-	4.847	7	-	-	-	-	16
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,120,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174
1,150,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173
1,060,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	14,067	3,780	157.6	18	-	-	6.459	7.14	-	-	-	-	176
1,020,000	<1,000	-	-	-	-	-	-	-	-	-	-	13,462	540	35.3	18	-	-	6.383	6.11	-	-	-	-	178
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
928,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138
1,080,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	15,709	1,190	105.2	17.2	-	-	6.402	7.19	-	-	-	-	184
1,070,000	<1,000	-	-	-	-	-	-	-	-	-	-	15,124	660	58.8	20.9	-	-	6.321	6.68	-	-	-	-	191
745,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	197
771,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	9,934	1,110	116.8	18.8	-	-	8.746	7.49	-	-	-	-	223
779,000	<1,000	-	-	-	-	-	-	-	-	-	-	13,998	870	-18.7	21.8	-	-	8.753	6.45	-	-	-	-	218
1,000,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	3,461	2,530	77.3	16.8	-	-	2.941	7.17	-	-	-	-	283
955,000	<1,000	-	-	-	-	-	-	-	-	-	-	20,146	1,330	52.9	24.2	-	-	2.971	6.5	-	-	-	-	289
1,000,000	<1,000	-	-	-	-	-	-	-	-	-	-	21,719	300	-34.6	24.6	-	-	2.965	7.08	-	-	-	-	286
1,010,000	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284
978,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	18,811	1,170	-295.3	20.6	-	-	10.209	6.77	-	-	-	-	286
991,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	18,851	1,580	20.7	17.3	-	-	10.547	6.81	-	-	-	-	318
830,000	<1,000	1,280,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168	-
803,000	<1,000	1,270,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174	-
789,000	<1,000	1,310,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

780,000	<1,000	1,170,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194	-
941,000	<1,000	1,450,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214	-
994,000	<1,000	1,510,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	217	-
994,000	<1,000	1,540,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220	-
1,260,000	<1,000	3,760,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	243	-
1,290,000	<1,000	3,380,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	255	-
1,300,000	<1,000	4,140,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	252	-
1,350,000	<1,000	4,110,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286	-
1,350,000	<1,000	4,490,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
671,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	15,489	730	-154.3	17.7	-	-	5.239	6.56	-	-	-	168
881,000	<1,000	-	-	-	-	-	-	-	-	-	-	17,037	3,140	-77.2	19.2	-	-	5.369	6.76	-	-	-	192
924,000	<1,000	1,040,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	136	-
1,030,000	<1,000	1,160,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	-
1,040,000	<1,000	1,200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	-
953,000	<1,000	1,200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-
951,000	<1,000	1,190,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-
643,000	<1,000	982,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	131	-
740,000	<10,000	1,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,500,000	-	-	-	-	100	-
1,200,000	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,200,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	-
1,200,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,000,000	-	-	-	-	240	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,000,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,600,000	-	-	-	-	230	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,000,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,000,000	-	-	-	-	470	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
649,000	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	<0.0005	2,480	-	156
744,000	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	<0.0005	2,480	-	154
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	880	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
801,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	28,624	660	38.5	18.8	-	-	7.719	6.99	-	-	-	460
794,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	25,944	1,190	-120.7	18.6	-	-	7.868	6.45	-	-	-	456
793,000	<1,000	-	-	-	-	-	-	-	-	-	-	24,319	330	-105.5	18.2	-	-	7.715	7.82	-	-	-	481
393,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	28,436	990	121	18.8	-	-	3.904	6.56	-	-	-	273
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
373,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	25,892	1,150	24.6	18.8	-	-	3.953	6.55	-	-	-	260
324,000	<1,000	-	-	-	-	-	-	-	-	-	-	24,458	680	-61.7	18.7	-	-	3.78	7.3	-	-	-	206
944,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	33,981	3,270	119.4	18.9	-	-	12.301	6.91	-	-	-	352
943,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	32,528	880	16.4	19	-	-	6.793	6.35	-	-	-	349
926,000	<1,000	-	-	-	-	-	-	-	-	-	-	31,467	760	-66.7	18.4	-	-	4.415	7.44	-	-	-	375
239,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	1,817	2,290	75.3	20.4	-	-	9.694	6.93	-	-	-	99
251,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	2,479	1,180	14.4	19.2	-	-	10.312	6.28	-	-	-	110
310,000	<1,000	-	-	-	-	-	-	-	-	-	-	3,014	1,480	-74.7	19.6	-	-	11.35	7.38	-	-	-	132
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	7.683	-	-	-	-	-
274,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	4,624	980	108.6	18	-	-	6.256	6.23	-	-	-	47
326,000	<1,000	-	-	-	-	-	-	-	-	-	-	5,036	2,930	-59.6	18.8	-	-	6.96	7.12	-	-	-	34
1,220,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	15,747	3,340	70.1	19	-	-	10.003	7.15	-	-	-	237
1,220,000	<1,000	-	-	-	-	-	-	-	-	-	-	26,933	2,140	63.4	18.6	-	-	11.302	6.2	-	-	-	225
1,210,000	<1,000	-	-	-	-	-	-	-	-	-	-	25,332	1,470	-62.5	18.9	-	-	10.155	7.34	-	-	-	247
542,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	22,446	1,590	-6.2	19.3	-	-	17.674	7.29	-	-	-	372
700,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	26,396	800	-73.2	18.6	-	-	14.732	6.12	-	-	-	418
671,000	<1,000	-	-	-	-	-	-	-	-	-	-	19,128	1,040	-61.6	19.4	-	-	12.53	7.45	-	-	-	506
838,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	24,586	1,130	-34.5	20.2	-	-	4.193	7.28	-	-	-	164
1,070,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	264
1,040,000	<1,000	-	-	-	-	-	-	-	-	-	-	24,291	1,380	-47.9	20.3	-	-	6.088	6.17	-	-	-	199
1,090,000	<1,000	-	-	-	-	-	-	-	-	-	-	23,763	750	-43.6	18.9	-	-	7.971	7.58	-	-	-	272
1,240,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	16,956	1,660	43.6	18.5	-	-	1.789	6.79	-	-	-	222
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,200,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	223
760,000	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<1,000	46,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
944,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	210
-	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
923,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169
1,120,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	23,741	4,480	175.4	16.9	-	-	4.835	6.62	-	-	-	184
882,000	<1,000	-	-	-	-	-	-	-	-	-	-	22,432	1,060	78.2	22	-	-	4.786	6.71	-	-	-	194
<1,000	80,000	-	<4	<4	<2	<2	<2	<2	-	-	-	900	6,290	176.2	21.4	-	-	6.001	8.43	-	-	-	49
<1,000	48,000	-	<4	<4	<2	<2	<2	<2	-	-	-	1,217	4,660	-11.4	24.7	-	-	6.12	10.08	-	-	-	50
938,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	212



Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

WSA SBT

894,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	292
977,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	17,632	1,410	-227.2	18.8	-	-	5.903	7.15	-	-	-	328
1,020,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	18,216	8,710	-61.9	14.8	-	-	6.226	7.01	-	-	-	233
853,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	18,644	1,980	-193.7	18.5	-	-	10.352	6.89	-	-	-	329
996,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	19,687	840	-7.9	17.5	-	-	10.734	6.79	-	-	-	299
628,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	19,539	2,710	-170.5	18.8	-	-	14.548	6.96	-	-	-	424
660,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	21,065	860	14.6	18.9	-	-	14.606	6.79	-	-	-	362
760,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000,000	-	-	-	-	480	-
760,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000,000	-	-	-	-	480	-
920,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000,000	-	-	-	-	640	-
1,100,000	<10,000	4,300,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,000,000	-	-	-	-	390	-
990,000	<10,000	9,100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,000,000	-	-	-	-	390	-
1,000,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000,000	-	-	-	-	470	-
1,200,000	<10,000	7,300,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,400,000	-	-	-	-	290	-
1,200,000	<10,000	7,500,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000,000	-	-	-	-	300	-
710,000	<10,000	4,700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,000,000	-	-	-	-	280	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	-
1,200,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,000,000	-	-	-	-	270	-
535,000	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	120
289,000	-	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	39
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
251,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	20,245	1,050	145.2	20.2	-	-	6.102	7.58	-	-	-	504
242,000	<1,000	-	-	-	-	-	-	-	-	-	-	18,673	1,320	-120.5	23.4	-	-	6.218	6.72	-	-	-	442
265,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	20,045	410	-171.5	21	-	-	6.128	7	-	-	-	444
872,000	<1,000	2,820,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284	-
850,000	<1,000	3,140,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	311	-
987,000	<1,000	3,850,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	292	-
827,000	<1,000	3,310,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	370	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
703,000	<1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	149	-
264,000	<1,000	376,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-
19,000	8,000	-	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	188	-
126,000	78,000	26,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
868,000	<1,000	3,170,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	369	-
1,070,000	<1,000	5,240,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	268	-
975,000	<1,000	3,900,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	214	-
1,030,000	<1,000	3,150,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	258	-
87,000	<1,000	1,460,000	<4	<4	<2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	394	-
854,000	<1,000	1,220,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	-
907,000	-	1,090,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	230	-
770,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000,000	-	-	-	-	76	-
850,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,000,000	-	-	-	-	260	-
840,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000,000	-	-	-	-	230	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000,000	-	-	-	-	260	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,100,000	-	-	-	-	280	-
1,400,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,800,000	-	-	-	-	58	-
1,000,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,000,000	-	-	-	-	440	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000,000	-	-	-	-	380	-
870,000	<10,000	4,200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000,000	-	-	-	-	280	-
643,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	27,123	1,870	-184.2	21.9	-	-	1.168	6.98	-	-	-	190
960,000	<10,000	670,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,200,000	-	-	-	-	63	-
970,000	<10,000	680,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,400,000	-	-	-	-	68	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,200,000	-	-	-	-	85	-
824,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	4,972	2,460	-8.3	21.1	-	-	0.549	7.48	-	-	-	41
380,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,000,000	-	-	-	-	160	-
320,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,500,000	-	-	-	-	150	-
1,300,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	22,139	1,610	-170.7	19.9	-	-	0.582	6.93	-	-	-	191
1,280,000	<1,000	-	-	-	-	-	-	-	-	-	-	18,925	1,470	-72.5	18.8	-	-	0.81	7.35	-	-	-	203
730,000	<10,000	1,400,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,500,000	-	-	-	-	220	-
<1,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	22,842	1,490	-6.4	18	-	-	1.248	5.11	-	-	-	18
79,000	<1,000	-	-	-	-	-	-	-	-	-	-	20,532	1,190	-57.1	17.3	-	-	1.38	6.65	-	-	-	34
1,200,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	-
1,040,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	27,388	1,670	13.2	19.4	-	-	4.852	6.63	-	-	-	360
1,040,000	<1,000	-	-	-	-	-	-	-	-	-	-	22,917	2,980	-55.6	17.2	-	-	5.24	7.58	-	-	-	381
380,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	-
160,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-
340,000	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-
990,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	370	-
1,000,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	290	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	310	-
1,400,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	-
1,200,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320	-
1,100,000	<10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340	-
-	-	-	-	-	-	-	-	-	-	-	-	15,528	1,200	-	20.6	-229	-	-	6.11	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	15,528	1,200	-229	20.6	-	-	-	6.11	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	2	14,237	330	-136	18.2	-136	-	-	7.39	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	17,290	4,530	-26	18.6	-26	-	-	5.49	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	211,128	-10	-10.5	21.36	-	-	-	5.66	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	21,128	-10	-	21.36	-10.5	-	-	5.66	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,224	610	-	20	-127.2	-	-	6.34	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,224	610	-127.2	20	-	-	15.327	6.34	2	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	14,372	620	-	18.1	-127	-	-	6.43	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	14,372	620	-127	18.1	-	-	15.16	6.43	2.2	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,029	6,400	-65.5	18.6	-	-	16.135	6.93	2.8	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,029	6,400	-	18.6	-65.5	-	-	6.93	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	14,966	600	-	19.7	-87.1	-	-	6.67	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	15,460	600	-	19.9	-165.9	-	-	6.67	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,362	540	-	21.6	-147	-	-	6.62	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,362	540	-147	21.6	-	-	-	6.62	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	5	15,594	370	-157	17.1	-157	-	-	7.63	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	20,230	3,430	50.4	17.9	50.4	-	-	5.89	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	17,650.90	-10	125.6	21.54	-	-	-	5.78	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,650.90	-10	-	21.54	125.6	-	-	5.78	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,716	340	-	19	-52.1	-	-	6.63	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,716	340	-52.1	19	-	-	8.13	6.63	2	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,814	430	-	18.3	-69.5	-	-	6.62	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,814	430	-69.5	18.3	-	-	8.142	6.62	1.7	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,977	1,070	-80.2	18.4	-	-	8.341	6.67	2.2	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,977	1,070	-	18.4	-80.2	-	-	6.67	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	18,194	280	-	19.7	-16.9	-	-	6.7	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	15,070	750	-	19.9	-13.3	-	-	6.63	-	-	-	-
703,000	<1,000	-	<4	<4	<2	<2	<2	<2	-	-	-	17,934	2,460	154.1	15.7	-	-	6.964	5.94	-	-	-	444
-	-	-	-	-	-	-	-	-	-	-	-	15,257	4,300	-	18.7	-121.1	-	-	6.96	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,257	4,300	-121.1	18.7	-	-	-	6.96	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	2	19,379	640	24	18.6	24	-	-	7.24	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	23,430	4,510	79.8	18.4	79.8	-	-	5.79	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	23,566	190	90.3	20.4	-	-	-	6.23	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	23,566	190	-	20.4	90.3	-	-	6.23	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,933	390	-	18.8	-153.7	-	-	6.78	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,933	390	-153.7	18.8	-	-	12.17	6.78	3.7	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,220	420	-	17	-103.8	-	-	6.86	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,220	420	-103.8	17	-	-	11.53	6.86	2	-	-	-
-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	19,013	660	-10.1	18.6	-	-	12.242	6.91	3	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	19,013	660	-	18.6	-10.1	-	-	6.91	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	19,106	910	-	19.3	-36.1	-	-	6.9	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	19,137	240	-	19.1	-104.6	-	-	6.88	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	19,956	900	-	21.3	-210	-	-	6.4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	19,956	900	-210	21.3	-	-	-	6.4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	<1	19,091	6,370	-98	18.7	-98	-	-	7.21	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	23,350	3,810	26.3	17.7	26.3	-	-	6.03	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	21,985.70	470	99.6	20.92	-	-	-	6.56	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	21,985.70	470	-	20.92	99.6	-	-	6.56	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	18,099	560	-	18.5	-70.3	-	-	6.59	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	18,099	560	-70.3	18.5	-	-	7.38	6.59	3.4	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,677	460	-	16.5	-51.2	-	-	6.59	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,677	460	-51.2	16.5	-	-	7.541					

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

16	COFFEY	-	-	-	-	-	-	-	-	-	-	-	13,603.30	110	-	21.46	-328.8	-	-	6.97	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	20,497	420	-	19.5	-337.1	-	-	6.84	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	20,497	420	-337.1	19.5	-	-	3.957	6.84	7.5	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	17,981	500	-	19.5	-331.1	-	-	6.86	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	17,981	500	-331.1	19.5	-	-	3.965	6.86	4	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,230	420	-281.3	18	-	-	4.191	6.91	2.6	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,230	420	-	18	-281.3	-	-	6.91	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,959	180	-	20.2	-316.1	-	-	6.85	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	19,058	490	-	20.2	-334.1	-	-	6.79	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	7,658	2,050	-	20.4	-37.8	-	-	6.62	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	7,658	2,050	-37.8	20.4	-	-	6.62	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	13	9,504	1,670	-93	19.6	-	-	-	8.38	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	9,504	1,670	-	19.6	-93	-	-	8.38	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	9,280	2,400	10.6	22.6	-	-	6.88	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	9,280	2,400	-	22.6	10.6	-	6.88	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	9,494	1,660	-	20.6	-9.2	-	6.61	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	9,494	1,660	-9.2	20.6	-	-	6.61	1.1	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	8,756	1,040	-	18.8	-67.4	-	6.86	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	8,756	1,040	-67.4	18.8	-	-	6.86	0.1	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	17,332	160	-271.7	19.8	-271.7	-	-	6.74	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	48	20,633	1,790	-147	18.8	-	-	-	7.69	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	20,633	1,790	-	18.8	-147	-	7.69	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	23,790	2,210	-151.3	19.6	-	-	6.68	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	23,790	2,210	-	19.6	-151.3	-	6.68	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,652	630	41.2	20.1	41.2	-	9.53	6.69	1.2	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	23,086	390	-	18	-106.5	-	6.7	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	23,086	390	-106.5	18	-	-	9.91	6.7	3.1	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	22,380	370	-	20.1	-5.1	-	6.64	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	13,281	1,540	-168	18.8	-168	-	6.02	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	1	17,285	3,120	-155	21.2	-	-	6.97	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	17,285	3,120	-	21.2	-155	-	6.97	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	21,830	520	-30.1	18.4	-	-	6.43	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	21,830	520	-	18.4	-30.1	-	6.43	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	24,694.40	2,670	-4.5	27.93	-4.5	-	6.88	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	20,062	1,440	-	20.3	-146.9	-	6.77	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	20,062	1,440	-146.9	20.3	-	6.595	6.77	4	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	17,998	200	-156.5	18.1	-156.5	-	6.527	6.71	3.7	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,754	260	55.6	17.6	-	6.118	6.75	2.7	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,754	260	-	17.6	55.6	-	6.75	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,771	260	-	18.5	-48.8	-	6.77	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	18,000	0	-	19.2	-190.2	-	6.76	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	20,189	460	-169	19.3	-169	-	6.57	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<1	19,606	367,000	-182	19.5	-	-	7.27	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	19,606	3,670	-	19.5	-182	-	7.27	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	21,790	1,070	-150	19.1	-	-	6.45	-	-	-	-	-	
-	-	-	-	-	-	-																			

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

16	COFFEY	-	-	-	-	-	-	-	-	-	-	33,709	2,280	71.2	20	-	-	8.42	6.3	3.4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	31,571	440	107.5	17.2	107.5	-	8.115	6.22	1.8	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	34,701	2,070	61.5	18.7	61.5	-	8.727	6.42	1.6	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	13	26,689	480	-	20.7	95.2	-	-	6.12	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	6,306	1,830	-3	18.7	-3	-	-	7.54	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	9	4,380	4,100	63.5	18	-	-	-	7.28	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	4,380	4,100	-	18	63.5	-	-	7.28	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	7,397	690	193.4	17.8	-	-	-	6.9	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	7,397	690	-	17.8	193.4	-	-	6.9	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	9,930.80	260	89.1	18.43	89.1	-	-	7.04	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	11,665	1,150	-	19.2	-76.8	-	-	7.02	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	11,665	1,150	-76.8	19.2	-	-	6.69	7.02	3.8	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	11,630	410	48.3	17.1	48.3	-	7.287	6.93	4.3	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	14,009	450	32.3	17.7	-	-	7.138	6.93	2.8	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	14,009	450	-	17.7	32.3	-	-	6.93	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	22	15,162	340	-	18.1	-49.4	-	-	6.89	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	14,310	0	-	18.2	-150.4	-	-	6.84	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	21,997	60	26	18	26	-	-	6.28	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	11	17,015	5,370	45	18.5	-	-	-	6.79	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,015	5,370	-	18.5	45	-	-	6.79	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	18,759	320	20.1	17.6	-	-	-	6.43	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	18,759	320	-	17.6	20.1	-	-	6.43	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	24,297.30	110	-12.4	20.12	-12.4	-	-	6.42	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	24,172	780	-	18	-84.6	-	-	6.52	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	24,172	780	-84.6	18	-	-	4.78	6.52	8.5	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	21,380	200	2.5	16.8	2.5	-	4.972	6.51	4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	21,682	220	21.9	17.1	-	-	5.336	6.47	3.7	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	21,682	220	-	17.1	21.9	-	-	6.47	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	18	24,128	200	-	17.8	-2.9	-	-	6.58	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	22,590	0	-	17.5	-64.2	-	-	6.54	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	25,378	-5	-226	18.3	-226	-	-	6.64	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	<1	19,122	950	-207	18.3	-	-	-	7.69	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	19,122	950	-	18.3	-207	-	-	7.69	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	20,510	3,030	-141	18.6	-	-	-	6.2	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	20,510	3,030	-	18.6	-141	-	-	6.2	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	25,957.50	150	-221.8	22.59	-221.8	-	-	7	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	19,816	300	-209.2	19.1	-209.2	-	4.82	6.77	4	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	20,423	230	-	17.2	-186.9	-	-	6.78	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	20,423	230	-186.9	17.2	-	-	4.485	6.78	2.3	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	24,580	380	-67.9	17.9	-67.9	-	4.938	6.77	1.7	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	24,717	190	-	18.9	-76.9	-	-	6.68	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	25,724	230	-	19	-82.9	-	-	6.67	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	19,992	880	-142.5	19.5	-142.5	-	-	6.84	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	18,030	2,300	86	19.1	-	-	-	6.57	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	18,030	2,300	-	19.1	86	-	-	6.57	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	21,468.50	200	17.7	22.9	17.7	-	-	6.69	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,677	2,260	-	20.2	-5.4	-	-	6.64	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,677	2,260	-5.4	20.2	-	-	3.925	6.64	6	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	15,809	270	23	19.7	23	-	4.075	6.66	2	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,379	1,330	58.8	18.7	-	-	4.87	6.7	4.1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,379	1,330	-	18.7	58.8	-	-	6.7	-	-	-	-	-
-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	17,017	1,310	-	19.2	60.3	-	-	6.72	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	16,430	0	-	20	-25.2	-	-	6.65	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Ions								Organic	Soluble Metals by ICPAES	Explosives			pH	Physical Parameters				Halogenated Benzenes						
Chloride	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Ionic Balance	Anions Total	Cations Total	Methane	Iron (soluble)	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	pH (lab)	Electrical Conductivity @ 25C (lab)	Total suspended particulates	Total Dissolved Solids (TDS)	TOC	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene
mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L	µg/L	pH_unit	µS/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
1	1	1	1	1	0.01	0.01	0.01			4	4	2	0.01	1		10,000	1,000	5	2	2	2	2	5	5
										65		550						10	170	160	260	60		
6,000													5.5			35,000,000								
													6.5-9					0.9	0.5	2.5	2.5	4		
													6.5-8	7,000										

4,720	-	16	-	2,750	0.2	158	158	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
6,190	-	12	-	2,710	9.15	200	166	-	-	<4	<4	<2	7.39	18,200	-	12,100,000	10,000	<5	<2	<2	<2	<2	<5	<5
5,660	-	11	-	2,510	8.62	183	154	-	-	<4	<4	<2	7.46	17,000	-	11,600,000	10,000	<5	<2	<2	<2	<2	<5	<5
7,170	-	12	-	3,120	8.9	230	192	-	-	-	-	-	7.92	20,700	-	13,900,000	6,000	-	-	-	-	-	-	-
7,690	-	17	-	3,780	3.2	246	231	-	-	-	-	-	7.44	21,600	-	16,400,000	4,000	-	-	-	-	-	-	-
7,610	-	24	-	3,580	4.44	256	235	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
7,990	-	50	-	3,620	5.41	266	239	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
7,340	-	54	-	3,410	6.93	227	198	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
6,090	-	34	-	3,360	2.46	204	214	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
4,650	-	38	-	2,290	5.42	165	148	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
5,560	-	54	-	2,800	6.44	173	152	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
5,490	-	41	-	2,810	5.18	182	164	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
5,150	-	27	-	2,950	0.06	174	174	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
6,730	-	18	-	3,240	4.36	224	205	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
8,380	-	40	-	3,360	3.3	280	262	-	-	<4	<4	<2	7.46	24,600	-	17,200,000	6,000	<5	<2	<2	<2	<2	<5	<5
7,450	-	34	-	3,350	1.61	247	239	-	-	-	-	-	7.95	21,600	-	15,100,000	9,000	-	-	-	-	-	-	-
9,010	-	42	-	3,440	5.82	293	260	-	-	-	-	-	7.65	24,000	-	20,400,000	9,000	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
123	-	4	-	53	7.08	4.98	4.32	-	-	<4	<4	<2	6.24	524	-	1,070,000	8,000	<5	<2	<2	<2	<2	<5	<5
93	-	10	-	47	2.08	4.09	3.92	-	-	-	-	-	7.15	452	-	283,000	8,000	-	-	-	-	-	-	-
69	-	10	-	45	0.1	3.74	3.75	-	-	<4	<4	<2	6.63	390	-	304,000	18,000	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
3,970	-	39	-	2,350	0.3	144	145	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
4,070	-	39	-	2,350	0.96	147	144	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
4,430	-	35	-	2,160	8.04	156	132	-	-	<4	<4	<2	7.71	14,100	-	8,630,000	6,000	<5	<2	<2	<2	<2	<5	<5
4,540	-	35	-	2,380	4.17	159	146	-	-	-	-	-	8.06	14,000	-	8,830,000	7,000	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,720	-	28	-	2,170	0.81	129	127	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
5,150	-	31	-	2,460	7.5	176	152	-	-	<4	<4	<2	7.71	15,900	-	10,200,000	4,000	<5	<2	<2	<2	<2	<5	<5
5,420	-	30	-	2,750	4.27	184	169	-	-	-	-	-	8.04	16,200	-	10,200,000	14,000	-	-	-	-	-	-	-
4,010	-	31	-	2,320	1.44	135	132	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
4,770	-	34	-	2,480	6.01	156	138	-	-	<4	<4	<2	7.72	14,600	-	8,850,000	12,000	<5	<2	<2	<2	<2	<5	<5
5,090	-	33	-	2,680	5.36	165	148	-	-	-	-	-	8.12	14,500	-	8,860,000	17,000	-	-	-	-	-	-	-
7,240	-	16	-	3,380	6.12	236	209	-	-	<4	<4	<2	7.57	21,600	-	14,600,000	6,000	<5	<2	<2	<2	<2	<5	<5
7,700	-	16	-	3,640	4.96	248	225	-	-	-	-	-	8.02	21,400	-	14,900,000	4,000	-	-	-	-	-	-	-
7,570	-	19	-	3,750	2.99	245	231	-	-	-	-	-	7.55	21,900	-	16,600,000	3,000	-	-	-	-	-	-	-
7,640	-	19	-	3,730	3.78	247	229	-	-	-	-	-	7.55	21,600	-	17,600,000	2,000	-	-	-	-	-	-	-
6,210	-	44	-	2,930	4.22	207	190	-	-	<4	<4	<2	7.67	19,200	-	11,900,000	<1,000	<5	<2	<2	<2	<2	<5	<5
6,450	-	37	-	2,730	8.97	214	179	-	-	<4	<4	<2	7.82	19,200	-	12,600,000	3,000	<5	<2	<2	<2	<2	<5	<5
4,200	32	-	2,400	-	3.61	141	131	-	-	-	-	-	7.28	11,100	-	7,620,000	-	-	-	-	-	-	-	-
4,060	32	-	2,330	-	3.64	137	128	-	-	-	-	-	7.59	13,100	-	8,130,000	-	-	-	-	-	-	-	-
3,940	31	-	2,400	-	0.99	134	131	-	-	-	-	-	7.47	13,300	-	7,830,000	-	-	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

3,910	33	-	2,180	-	4.45	130	119	-	-	-	-	-	7.69	12,800	-	8,260,000	-	-	-	-	-	-	-	-
4,600	35	-	2,570	-	3.46	152	142	-	-	-	-	-	7.73	15,800	-	9,120,000	-	-	-	-	-	-	-	-
4,380	34	-	2,650	-	0.06	146	146	-	-	-	-	-	7.67	14,600	-	9,030,000	-	-	-	-	-	-	-	-
4,390	35	-	2,690	-	0.73	147	149	-	-	-	-	-	7.66	14,700	-	9,100,000	-	-	-	-	-	-	-	-
6,730	35	-	3,380	-	1.98	232	223	-	-	-	-	-	7.68	16,900	-	14,900,000	-	-	-	-	-	-	-	-
6,720	34	-	3,060	-	7.65	235	202	-	-	-	-	-	7.88	20,000	-	15,000,000	-	-	-	-	-	-	-	-
7,260	36	-	3,670	-	0.94	248	243	-	-	-	-	-	7.45	20,100	-	15,000,000	-	-	-	-	-	-	-	-
6,640	36	-	3,460	-	0.14	233	234	-	-	-	-	-	7.65	23,600	-	16,200,000	-	-	-	-	-	-	-	-
6,970	37	-	3,830	-	2.71	244	257	-	-	-	-	-	7.64	22,600	-	15,600,000	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
4,340	-	24	-	2,290	2.81	163	154	-	-	<4	<4	<2	7.1	13,900	-	9,340,000	42,000	<5	<2	<2	<2	<2	<5	<5
5,320	-	28	-	2,560	7.34	199	172	-	-	-	-	-	7.32	17,800	-	12,800,000	91,000	-	-	-	-	-	-	-
3,430	25	-	2,160	-	1.52	119	115	11	-	<4	<4	<2	7.87	11,000	-	7,020,000	-	<5	<2	<2	<2	<2	<5	<5
3,950	25	-	2,370	-	3.5	136	127	-	-	-	-	-	7.61	12,600	-	7,370,000	-	-	-	-	-	-	-	-
4,030	25	-	2,380	-	3.96	139	128	-	-	-	-	-	7.66	11,600	-	7,580,000	-	-	-	-	-	-	-	-
3,500	24	-	2,150	-	1.48	122	118	-	-	-	-	-	7.75	11,900	-	6,820,000	-	-	-	-	-	-	-	-
3,420	24	-	2,150	-	0.69	120	118	-	-	-	-	-	7.63	11,800	-	6,910,000	-	-	-	-	-	-	-	-
2,790	6	-	2,060	-	0.58	111	109	<10	-	<4	<4	<2	7.65	11,000	-	6,850,000	-	<5	<2	<2	<2	<2	<5	<5
2,700	35	-	2,200	-	-	-	-	<50	-	-	-	-	8.2	8,500	11,000	5,500,000	-	-	-	<1	<1	<1	-	<1
3,800	44	-	3,100	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.01	-	<1
3,800	44	-	3,100	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.01	-	<1
6,600	40	-	4,000	-	-	-	-	<50	-	-	-	-	7.7	20,000	9,800	12,000,000	-	-	-	<1	<1	<1	-	<1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.01	-	<1
7,200	49	-	4,000	-	-	-	-	<50	-	-	-	-	8	13,000	14,000	7,600,000	-	-	-	<1	<1	<1	-	<1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.01	-	<1
5,700	56	-	4,700	-	-	-	-	440	-	-	-	-	7.6	17,000	14,000	12,000,000	-	-	-	<1	<1	<1	-	<1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.01	-	<1
3,870	-	25	-	2,060	2.89	123	116	2,810	-	<4	<4	<2	8.13	11,800	-	-	-	-	-	<2	<2	<2	<5	<5
3,860	-	24	-	2,100	2.72	124	118	3,450	-	<4	<4	<2	8.06	12,400	-	-	-	-	-	<2	<2	<2	<5	<5
4,380	-	-	-	-	-	-	-	-	-	-	-	-	7.94	13,600	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
9,290	-	60	-	4,550	2.42	292	278	-	-	<4	<4	<2	7.44	26,200	-	20,600,000	14,000	<5	<2	<2	<2	<2	<5	<5
8,800	-	66	-	4,490	0.62	278	275	-	-	<4	<4	<2	7.45	27,600	-	18,700,000	6,000	<5	<2	<2	<2	<2	<5	<5
9,490	-	70	-	4,730	1.52	297	288	-	-	-	-	-	7.59	28,400	-	24,400,000	<1,000	-	-	-	-	-	-	-
9,100	-	7	-	4,500	2.44	294	280	-	-	<4	<4	<2	7.16	27,300	-	19,700,000	13,000	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8,740	-	8	-	4,520	<0.01	281	281	-	-	<4	<4	<2	7.07	28,300	-	19,400,000	14,000	<5	<2	<2	<2	<2	<5	<5
9,830	-	5	-	4,820	3.09	308	290	-	-	-	-	-	7.21	28,300	-	25,400,000	9,000	-	-	-	-	-	-	-
11,700	-	31	-	5,690	3.2	376	352	-	-	<4	<4	<2	7.48	33,800	-	25,400,000	11,000	<5	<2	<2	<2	<2	<5	<5
11,200	-	32	-	5,820	0.01	362	362	-	-	<4	<4	<2	7.36	37,200	-	26,400,000	9,000	<5	<2	<2	<2	<2	<5	<5
12,300	-	33	-	6,430	0.75	391	397	-	-	-	-	-	7.53	36,700	-	36,400,000	8,000	-	-	-	-	-	-	-
615	-	40	-	420	0.63	25.4	25	-	-	<4	<4	<2	7.15	2,510	-	1,530,000	7,000	<5	<2	<2	<2	<2	<5	<5
624	-	43	-	386	4.95	25.9	23.5	-	-	<4	<4	<2	6.86	2,340	-	1,500,000	8,000	<5	<2	<2	<2	<2	<5	<5
657	-	44	-	393	6.37	28.4	25	-	-	-	-	-	7.31	2,410	-	1,620,000	8,000	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	13,000	<5	<2	<2	<2	<2	<5	<5
1,030	-	13	-	786	1.76	42	43.5	-	-	<4	<4	<2	6.75	4,020	-	2,700,000	6,000	<5	<2	<2	<2	<2	<5	<5
1,210	-	13	-	839	3.35	48.4	45.3	-	-	-	-	-	7.13	4,680	-	3,170,000	9,000	-	-	-	-	-	-	-
9,360	-	44	-	4,620	3.43	327	305	-	-	<4	<4	<2	7.49	27,600	-	21,100,000	6,000	<5	<2	<2	<2	<2	<5	<5
8,800	-	47	-	4,560	1.3	309	301	-	-	-	-	-	7.24	28,700	-	20,100,000	5,000	-	-	-	-	-	-	-
9,550	-	50	-	4,840	2.22	335	320	-	-	-	-	-	7.44	29,400	-	27,100,000	16,000	-	-	-	-	-	-	-
7,370	-	78	-	3,700	0.99	219	215	-	-	<4	<4	<2	7.62	20,600	-	14,900,000	10,000	<5	<2	<2	<2	<2	<5	<5
9,230	-	69	-	4,450	2.82	274	259	-	-	<4	<4	<2	7.31	27,900	-	19,400,000	4,000	<5	<2	<2	<2	<2	<5	<5
10,200	-	78	-	5,000	1.57	301	292	-	-	-	-	-	7.46	29,800	-	25,000,000	6,000	-	-	-	-	-	-	-
7,930	-	22	-	3,770	4.05	248	228	-	-	<4	<4	<2	7.58	22,400	-	16,200,000	7,000	<5	<2	<2	<2	<2	<5	<5
8,590	-	43	-	4,370	1.44	272	264	-	-	<4	<4	<2	7.39	27,100	-	18,000,000	7,000	<5	<2	<2	<2	<2	<5	<5
8,570	-	28	-	3,910	6.33	270	238	-	-	-	-	-	7.41	26,600	-	18,200,000	7,000	-	-	-	-	-	-	-
9,150	-	45	-	4,670	1.85	295	284	-	-	-	-	-	7.55	27,100	-	22,800,000	11,000	-	-	-	-	-	-	-
5,530	-	28	-	2,750	8.26	191	162	-	-	<4	<4	<2	7.9	17,400	-	10,500,000	2,000	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5,240	-	32	-	3,280	2.15	183	191	-	-	<4	<4	<2	7.26	16,900	-	10,700,000	2,000	<5	<2	<2	<2	<2	<5	<5
8,300	55	-	5,100	-	-	-	-	<50	-	-	-	-	7.6	21,000	-	14,000,000	-	-	-	<1	<1	<1	-	<1
235	-	48	-	128	1.7	11.3	10.9	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6,070	-	32	-	2,960	4.01	205	189	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
7,090	-	26	-	3,370	3.94	233	215	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
7,900	-	22	-	3,80																				

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

8,810	OFFEY-	56	-	4,480	2.16	296	309	-	-	<4	<4	<2	-	-	-	-	<5	<2	<2	<2	<2	<5	<5	
6,200	-	33	-	2,920	1.93	207	199	-	-	<4	<4	<2	7.7	18,600	-	11,700,000	15,000	<5	<2	<2	<2	<5	<5	
6,150	-	30	-	2,610	8.47	206	174	-	-	<4	<4	<2	7.42	18,800	-	12,200,000	21,000	<5	<2	<2	<2	<5	<5	
6,510	-	31	-	3,140	2.41	212	202	-	-	<4	<4	<2	7.74	19,300	-	11,200,000	2,000	<5	<2	<2	<2	<5	<5	
7,540	-	33	-	3,790	0.82	248	244	-	-	<4	<4	<2	7.84	22,100	-	14,200,000	3,000	<5	<2	<2	<2	<5	<5	
6,670	-	37	-	3,400	0.7	211	214	-	-	<4	<4	<2	7.77	20,400	-	12,700,000	1,000	<5	<2	<2	<2	<5	<5	
7,400	-	35	-	3,210	7.32	232	201	-	-	<4	<4	<2	7.86	21,300	-	13,500,000	3,000	<5	<2	<2	<2	<5	<5	
8,300	55	-	5,100	-	-	-	-	<50	-	-	-	-	7.6	21,000	130,000	14,000,000	-	-	-	<1	<1	<1	-	<1
8,300	55	-	5,100	-	-	-	-	<50	-	-	-	-	7.6	21,000	130,000	-	-	-	-	<1	<1	<1	-	<1
8,700	70	-	6,600	-	-	-	-	-	-	-	-	-	7.7	27,000	68,000	17,000,000	-	-	-	-	-	-	-	-
8,200	40	-	4,300	-	-	-	-	-	-	-	-	-	7.8	27,000	130,000	-	-	-	-	-	-	-	-	-
14,000	47	-	6,800	-	-	-	-	<50	-	-	-	-	7.6	26,000	43,000	-	-	-	-	<1	<1	<1	-	<1
7,900	56	-	7,400	-	-	-	-	-	-	-	-	-	7.5	32,000	170,000	-	-	-	-	-	-	-	-	-
9,500	34	-	5,100	-	-	-	-	-	-	-	-	-	7.8	30,000	270,000	-	-	-	-	-	-	-	-	-
9,800	35	-	5,300	-	-	-	-	-	-	-	-	-	7.6	31,000	41,000	-	-	-	-	-	-	-	-	-
19,000	34	-	4,100	-	-	-	-	<50	-	-	-	-	8.1	22,000	1,400,000	15,000,000	-	-	-	<1	<1	<1	-	<1
11,000	31	-	5,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11,000	29	-	5,000	-	-	-	-	-	-	-	-	-	7.8	30,000	260,000	-	-	-	-	-	-	-	-	-
2,780	-	19	-	1,260	5.98	94.9	84.2	20	-	<4	<4	<2	7.99	8,730	-	-	-	-	-	<2	<2	<2	<5	<5
676	-	16	-	414	2.02	26.3	25.3	<10	-	<4	<4	<2	-	-	-	-	-	-	<2	<2	<2	<5	<5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6,820	-	42	-	3,410	1.58	198	192	-	-	<4	<4	<2	6.97	19,400	-	14,700,000	9,000	<5	<2	<2	<2	<2	<5	<5
6,760	-	46	-	3,670	1.45	196	202	-	-	-	-	-	7.89	20,300	-	14,000,000	7,000	-	-	-	-	-	-	-
6,870	-	48	-	3,730	1.13	200	204	-	-	<4	<4	<2	7.46	21,100	-	15,200,000	10,000	<5	<2	<2	<2	<2	<5	<5
5,880	42	-	3,300	-	0.05	201	201	-	-	-	-	-	7.72	20,700	-	13,900,000	-	-	-	-	-	-	-	-
5,520	42	-	3,290	-	2.26	198	207	-	-	-	-	-	-	18,600	-	-	-	-	-	-	-	-	-	-
6,540	41	-	3,580	-	1.07	239	234	-	-	-	-	-	7.58	19,400	-	15,100,000	-	-	-	-	-	-	-	-
8,980	43	-	4,800	-	0.8	272	276	791	-	<4	<4	<2	7.41	27,200	-	18,700,000	-	<5	<2	<2	<2	<2	<5	<5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5,880	4	-	2,950	-	4.79	190	173	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	<5	<5
1,240	2	-	590	-	11.8	42.1	33.2	-	-	-	-	-	7.85	4,440	-	2,470,000	-	-	-	-	-	-	-	-
4,400	46	-	2,030	-	5.14	125	113	-	-	<4	<4	<2	-	-	-	-	-	<5	<2	<2	<2	<2	<5	<5
147	4	-	159	-	5.78	8.47	7.55	-	-	-	-	-	9.31	826	-	468,000	-	-	-	-	-	-	-	-
7,870	80	-	3,850	-	1.95	242	233	11,300	-	<4	<4	<2	7.59	24,700	-	15,400,000	-	<5	<2	<2	<2	<2	<5	<5
9,730	32	-	5,010	-	1.17	316	323	<10	-	<4	<4	<2	7.49	26,700	-	20,000,000	-	<5	<2	<2	<2	<2	<5	<5
7,650	29	-	4,010	-	3.95	274	253	<10	-	<4	<4	<2	7.66	23,600	-	17,100,000	-	<5	<2	<2	<2	<2	<5	<5
7,240	48	-	4,240	-	0.81	245	249	<10	-	<4	<4	<2	7.6	23,900	-	17,000,000	-	<5	<2	<2	<2	<2	<5	<5
6,860	61	-	4,120	-	3.36	196	210	9,560	-	<4	<4	<2	7.6	21,900	-	13,900,000	-	<5	<2	<2	<2	<2	<5	<5
5,200	40	-	2,800	-	6.28	167	147	-	-	-	-	-	7.64	16,100	-	10,200,000	-	-	-	-	-	-	-	-
4,930	36	-	3,000	-	1.46	158	153	-	-	-	-	-	7.56	16,000	-	9,440,000	-	-	-	-	-	-	-	-
4,900	6.5	-	3,500	-	-	-	-	<50	-	-	-	-	7.5	18,000	1,800,000	-	-	-	-	<1	<1	<0.01	-	<1
9,200	19	-	6,200	-	-	-	-	<50	-	-	-	-	7.1	31,000	570,000	-	-	-	-	<1	<1	<0.01	-	<1
8,700	16	-	5,400	-	-	-	-	<50	-	-	-	-	7.3	26,000	480,000	-	-	-	-	-	-	-	-	-
11,000	15	-	5,100	-	-	-	-	-	-	-	-	-	7.8	30,000	1,600,000	-	-	-	<1	<1	<0.01	-	<1	
11,000	16	-	5,400	-	-	-	-	-	-	-	-	-	7.3	31,000	1,000,000	-	-	-	<1	<1	<0.01	-	<1	
7,500	26	-	3,300	-	-	-	-	<50	-	-	-	-	8.2	20,000	62,000	-	-	-	<1	<1	<0.01	-	<1	
9,500	18	-	5,200	-	-	-	-	<50	-	-	-	-	7.3	32,000	33,000	-	-	-	<1	<1	<0.01	-	<1	
11,000	8.9	-	4,200	-	-	-	-	-	-	-	-	-	7.6	30,000	20,000	-	-	-	<1	<1	<0.01	-	<1	
8,800	12	-	5,300	-	-	-	-	<50	-	-	-	-	7.8	27,000	25,000	-	-	-	<1	<1	<1	-	<1	
9,240	-	5	-	4,520	4.1	288	266	-	-	<4	<4	<2	7.5	25,400	-	17,400,000	9,000	<5	<2	<2	<2	<2	<5	<5
1,500	<5	-	1,300	-	-	-	-	<50	-	-	-	-	8.1	6,400	25,000	-	-	-	-	<1	<1	<1	-	<1
1,600	<5	-	1,300	-	-	-	-	<50	-	-	-	-	8	6,600	11,000	-	-	-	<1	<1	<1	-	<1	
1,500	<5	-	1,100	-	-	-	-	-	-	-	-	-	7.9	6,100	24,000	-	-	-	<1	<1	<0.01	-	<1	
1,080	-	2	-	999	2.6	50.4	53.1	-	-	<4	<4	<2	7.78	4,670	-	2,750,000	11,000	<5	<2	<2	<2	<2	<5	<5
10,000	11	-	5,100	-	-	-	-	-	-	-	-	-	7.1	29,000	18,000	-	-	-	<1	<1	<0.01	-	<1	
9,900	9.5	-	4,800	-	-	-	-	-	-	-	-	-	7.2	29,000	25,000	-	-	-	-	-	-	-	-	<5
7,010	-	43	-	3,660	1.7	235	228	-	-	<4	<4	<2	7.4	19,700	-	13,100,000	20,000	<5	<2	<2	<2	<2	<5	<5
7,110	-	41	-	3,330	6.3	239	211	-	-	-	-	-	7.87	21,500	-	17,400,000	2,000	-	-	-	-	-	-	-
1,200	18	-	790	-	-	-	-	150	-	-	-	-	7.3	5,800	75,000	-	-	-	<1	<1	<1	-	<1	
7,890	-	4	-	3,630	7.56	245	210	-	-	<4	<4	<2	4.92	21,400	-	14,300,000	24,000	<5	<2	<2	<2	<2	<5	<5
8,600	-	5	-	3,800	8.93	270	225	-	-	-	-	-	6.38	25,800	-	23,000,000	15,000	-	-	-	-	-	-	-
5,500	38	-	3,500	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1	
9,050	-	27	-	4,410	2.51	306	291	-	-	<4	<4	<2	7.15	25,500	-	19,100,000	18,000	<5	<2	<2	<2	<2	<5	<5
9,030	-	31	-	4,400	2.58	308	292	-	-	-	-	-	7.46	27,400	-	25,700,000	10,000	-	-	-	-	-	-	-
10,000	32	-	5,900	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,800	<5	-	1,800	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,300	<5	-	1,300	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9,900	36	-	4,900	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8,600	22	-	4,700	-	-	-	-	<50	-	-	-													

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

8,600	45	-	5,400	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
10,000	48	-	5,800	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
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59 of 108

60 of 108

[illegible]

62 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

[illegible]

64 of 108

65 of 108

66 of 108

																		Herbicides		Inorg				
Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorocyclopentadiene	Hexachloroethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	2,4,5-Trichlorophenoxypropanoic acid	Pronamide	Fluoride	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Sulfate as SO4 (filtered)	Aggressivity
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-
5	5	50	5	50	5	5	5		10		2	5	5	5	5	50			2	100	10	10	1,000	
240			770					4,000		360		330	70			100								
																							1,000,000	
											0.1													

<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	30	702,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	180	487,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	210	435,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	1,290	541,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	1,030	562,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	280	1,110,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	<50	858,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	200	146,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	140	486,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	60	611,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	10	210	22,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	330	135,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	2,050	586,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	110	631,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	110	947,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	100	860,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	140	961,000	-
<5	<5	<50	68	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	400	1,230	34,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	410	850	31,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	820	1,230	24,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<5	<5	<50	24	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	-	-	-	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	50	457,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	30	458,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	150	454,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	60	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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<5	<5	<50	7	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	<20	278,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	60	446,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	70	471,000	-
<5	<5	<50	12	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	<20	355,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	140	277,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	60	264,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	120	577,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	16,200	569,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	4,150	544,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	3,650	547,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	940	583,000	-
<5	<5	<50	<5	<50	<5	<5	<5	-	<10	<2	<2	<5	<5	<5	<5	<50	-	-	<2	-	<10	1,340	593,000	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-

68 of 108

69 of 108

70 of 108

71 of 108

72 of 108

anics					Nutrients									Monocyclic aromatic hydrocarbons												
Alkalinity (Carbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Organic)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphorus total	Phosphate total (P)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	N-Ethyl perfluorooctane sulfonamide (EtFOSA) (TOPA)		
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
				10	10	10	10	10	100	10	100			5	5	5	5		5	5	5	5	5			
					900											30										
									100	5																
	50,000				900				1,720	140																

-	-	-	-	-	<100	80	60	20	600	-	500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	360	170	160	10	1,600	-	1,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	360	100	80	20	1,800	-	1,700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	630	30	30	<10	3,300	-	3,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	600	<10	<10	<10	2,300	-	2,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	<100	80	20	60	1,200	-	1,100	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	480	<10	<10	<10	700	-	700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	4,360	<10	<10	<10	5,400	-	5,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,120	<10	<10	<10	1,500	-	1,500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	2,620	10	10	<10	2,800	-	2,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	4,910	<10	<10	<10	7,000	-	7,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	2,700	<10	<10	<10	5,000	-	5,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	<100	<10	<10	<10	4,200	-	4,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	700	30	30	<10	800	-	800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	110	<10	<10	<10	<500	-	<500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	250	60	40	20	800	-	700	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	120	170	140	30	<500	-	<500	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	120	900	780	120	4,800	-	3,900	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	100	830	820	10	2,700	-	1,900	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	5,840	20	20	<10	7,800	-	7,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,260	70	70	<10	1,700	-	1,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,310	60	60	<10	1,600	-	1,500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,160	30	10	20	1,200	-	1,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,080	<10	<10	20	1,300	-	1,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	980	<10	<10	<10	1,200	-	1,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	690	40	20	20	800	-	800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	750	130	20	110	1,000	-	900	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	2,810	<10	<10	<10	3,500	-	3,500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	3,570	3,110	3,110	<10	6,900	-	3,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	3,350	<10	<10	<10	3,200	-	3,200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	820	110	20	90	1,000	-	900	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	120	20	<10	50	28,300	-	28,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	250	60	20	40	3,900	-	3,800	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	290	50	<10	50	2,600	-	2,600	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1,320	<10	<10	<10	3,400	-	3,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	890	<10	<10	<10	3,700	-	3,700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	6,000	-	-	<20	3,220	<10	<10	<10	5,600	<20	5,600	-	-	-	-	-	-	-	-	-	-	-	-	-
-	10,000	-	-	<10	3,210	20	20	<10	3,200	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	11,000	-	-	<10	3,250	<10	<10	<10	3,100	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	27,000	-	-	<10	4,140	20	20	<10	3,600	<20	3,600	-	-	-	-	-	-	-	-	-	-	-	-
-	26,000	-	-	<10	3,360	<10	<10	<10	3,300	<20	3,300	-	-	-	-	-	-	-	-	-	-	-	-
-	19,000	-	-	<10	3,820	<10	<10	<10	3,700	-	3,700	-	-	-	-	-	-	-	-	-	-	-	-
-	20,000	-	-	<10	3,800	<10	<10	<10	3,400	<20	3,400	-	-	-	-	-	-	-	-	-	-	-	-
-	93,000	-	-	<10	30	2,010	2,000	10	2,300	<20	300	-	-	-	-	-	-	-	-	-	-	-	-
-	174,000	-	-	<10	380	2,080	2,070	10	3,100	70	1,000	-	-	-	-	-	-	-	-	-	-	-	-
-	18,000	-	-	50	590	60	60	<10	700	50	600	-	-	-	-	-	-	-	-	-	-	-	-
-	22,000	-	-	<10	600	<10	<10	<10	800	<50	800	-	-	-	-	-	-	-	-	-	-	-	-
-	44,000	-	-	<10	990	20	20	<10	1,300	100	1,300	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	110	130	110	20	1,100	-	1,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	500	10	<10	10	2,000	-	2,000	-	-	-	-	-	-	-	-	-	-	-	-
-	21,000	-	-	<10	2,780	<10	<10	<10	2,800	220	2,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	<5,000	-	-	80	2,600	40	40	<10	2,900	90	2,900	-	-	-	-	-	-	-	-	-	-	-	-
-	<5,000	-	-	100	2,770	30	30	<10	2,800	110	2,800	-	-	-	-	-	-	-	-	-	-	-	-
-	15,000	-	-	<10	2,300	<10	<10	<10	2,300	80	2,300	-	-	-	-	-	-	-	-	-	-	-	-
-	9,000	-	-	<10	2,300	<10	<10	<10	2,300	80	2,300	-	-	-	-	-	-	-	-	-	-	-	-
-	187,000	-	-	<10	90	20	20	<10	16,100	7,330	16,100	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	11,000	-	-	20	1,500	1,900	80	1,800	4,900	20	3,000	-	-	<1	<1	<1	<1	<3	-	-	-	-	<0.05
-	-	-	-	-	3,200	<50	<20	<20	4,900	<500	4,900	-	-	<1	<1	<1	<1	44	-	-	-	-	<0.005
-	-	-	-	-	3,200	<50	<20	<20	-	-	4,900	-	-	<1	<1	<1	<1	44	-	-	-	-	-
-	9,800	-	-	140	1,600	<50	<20	<20	900	10	900	-	-	<1	<1	<1	<1	3	-	-	-	-	<0.005
-	-	-	-	10	1,200	<50	<20	<20	3,600	550	3,600	-	-	<1	<1	<1	<1	5	-	-	-	-	-
-	14,000	-	-	-	3,800	<50	<20	<20	4,500	10	4,500	-	-	<1	<1	<1	<1	<3	-	-	-	-	<0.05
-	-	<200	-	-	2,900	840	40	800	3,240	-	2,400	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
-	14,000	-	-	-	290	<50	<20	<20	400	<10	400	-	-	<1	<1	<1	<1	<3	-	-	-	-	<0.05
-	-	540	-	-	360	<50	<20	<20	900	-	900	-	-	<1	<1	<1	<1	<3	-	-	-	-	-
<1,000	-	-	<10	<10	2,490	-	<10	<10	3,000	-	3,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
<1,000	-	-	<10	<10	2,490	-	<10	<10	3,200	-	3,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	2,960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	5,160	20	10	10	6,000	-	6,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	4,360	<10	<10	10	5,300	-	5,300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	4,810	<10	<10	<10	5,400	-	5,400	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	820	<10	<10	<10	1,900	-	1,900	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	900	<10	<10	<10	1,600	-	1,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	410	2,400	2,400	<10	3,000	-	600	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1,380	<10	<10	20	3,300	-	3,300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	2,390	<10	<10	20	9,600	-	9,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	140	1,300	1,290	10	15,900	-	14,600	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	900	<10	<10	<10	1,200	-	1,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	820	40	40	<10	1,600	-	1,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	690	<10	<10	<10	<1,000	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	580	40	-	-	16,200	-	16,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	400	1,560	1,540	20	6,000	-	4,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	190	700	690	10	6,100	-	5,400	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	170	<10	<10	<10	8,500	-	8,500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	230	<10	<10	<10	<1,000	-	<1,000	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	90	<10	<10	<10	<500	-	<500	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	7,770	50	20	30	9,800	-	9,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	8,160	<10	<10	<10	8,900	-	8,900	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	8,000	50	50	<10	9,400	-	9,400	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	1,050	170	170	<10	3,200	-	3,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	3,050	<10	<10	<10	3,700	-	3,700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	1,300	<10	<10	<10	1,900	-	1,900	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	2,420	20	20	<10	3,100	-	3,100	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	390	<10	<10	<10	6,900	-	6,900	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	800	<10	<10	<10	3,000	-	3,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	130,000	-	-	70	3,400	<50	<20	<20	2,900	<10	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	<0.05
-	-	-	-	-	330	1,630	1,570	60	3,200	-	1,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	530	100	100	<10	1,500	-	1,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	940	<10	<10	<10	1,000	-	1,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	450	210	<10	250	2,300	-	2,100	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	600	580	<10	760	1,400	-	800	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	570	4,140	3,300	840	6,100	-	2,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	650	2,100	1,120	980	4,700	-	2,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-
-	-	-	-	-	810	<10	<10	<10	1,000	-	1,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	-	-	-	-	850	80	50	30	1,500	-	1,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	<100	20	20	<10	600	-	600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	150	<10	<10	<10	5,700	-	5,700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,410	10	<10	20	1,800	-	1,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	1,730	<10	<10	10	3,700	-	3,700	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	3,000	<10	<10	<10	5,800	-	5,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	3,310	200	20	180	5,500	-	5,300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	130,000	-	-	70	3,400	<50	<20	<20	2,900	<10	2,900	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	<0.05
-	-	-	-	70	3,400	<50	<20	<20	-	<10	2,900	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	68,000	-	-	160	4,400	<50	<20	<20	3,400	160	3,400	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	70	3,400	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	100	80	<50	<20	<20	-	-	<200	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	110	110	<50	<20	<20	-	-	<200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	70	70	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	30	80	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	1,400,000	-	-	60	990	<50	-	-	2,000	280	2,000	-	-	<1	<1	<1	<1	3	-	-	-	-	-	<0.05
-	-	-	-	20	230	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	10	230	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<1,000	-	-	90	-	20	-	90	<10	1,400	-	1,300	220	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
<1,000	-	-	60	40	70	-	30	30	1,300	-	1,200	250	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	7,650	730	730	<10	8,900	-	8,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	7,070	<10	<10	<10	8,300	-	8,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	7,500	<10	<10	<10	9,200	-	9,200	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	19,000	-	-	<10	4,230	<10	<10	<10	4,200	160	4,200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	19,000	-	-	<10	4,180	20	20	<10	4,300	270	4,300	-	830	-	-	-	-	-	-	-	-	-	-	-
-	16,000	-	-	10	3,580	<10	<10	<10	4,500	270	4,500	-	-	-	-	-	-	-	-	-	-	-	-	-
-	8,000	-	-	<10	2,690	<10	<10	<10	2,800	160	2,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	<10	40	<10	<10	<10	300	110	300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	187,000	-	-	<10	80	260	260	<10	-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	<10	2,400	<10	<10	<10	2,300	50	2,300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	20,000	-	-	60	470	<10	<10	<10	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	106,000	-	-	<10	6,480	80	80	<10	6,500	110	6,400	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	<5,000	-	-	<10	180	110	110	<10	-	90	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	<5,000	-	-	<10	470	920	820	100	-	<20	-	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	<5,000	-	-	<10	4,500	<10	<10	<10	4,800	<50	4,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	168,000	-	-	<10	9,970	120	120	<10	10,700	240	10,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	330,000	-	-	<10	6,070	160	160	<10	6,900	330	6,700	-	-	-	-	-	-	-	-	-	-	-	-	-
-	34,000	-	-	20	5,360	70	60	10	5,300	40	5,200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	140	<10	650	620	40	-	-	700	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	90	670	<50	<20	<20	-	<10	800	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	60	670	<50	<20	<20	-	<10	200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	<10	230	-	<20	<20	-	<10	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	<10	200	-	<20	<20	-	<10	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	<10	80	-	<20	<20	-	-	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	10	120	-	<20	<20	-	-	-	-	-	<1	<1	<1	<1	10	-	-	-	-	-	-
-	-	-	-	20	20	-	<20	<20	-	<10	-	-	-	<1	<1	<1	<1	7	-	-	-	-	-	-
-	-	-	-	50	<10	260	170	90	-	-	<200	-	-	<1	<1	<1	<1	34	-	-	-	-	-	-
-	-	-	-	-	100	<10	<10	<10	<500	-	<500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	80	30	<50	<20	<20	-	-	<200	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	20	30	<50	<20	<20	-	-	<200	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	10	30	-	<20	<20	-	-	-	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	<10	5,360	5,360	<10	6,900	-	1,500	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	20	210	-	70	<20	-	-	-	-	-	<1	<1	<1	<1	12	-	-	-	-	-	-
-	-	-	-	20	220	-	120	<20	-	-	-	-	-	<5	<5	<5	<5	190	-	-	-	-	-	-
-	-	-	-	-	1,940	740	<10	760	3,000	-	2,300	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	200	50	10	40	1,200	-	1,200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	<10	7,100	<50	<20	<20	-	-	18,000	-	-	<1	<1	<1	<1	6	-	-	-	-	-	-
-	-	-	-	-	130	6,270	6,250	20	14,100	-	7,800	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	120	940	900	40	900	-	<500	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	360	8,900	8,400	570	-	-	400	-	-	<1	<1	<1	<1	5	-	-	-	-	-	-
-	-	-	-	-	<100	12,100	12,100	20	13,700	-	1,600	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	60	14,200	14,200	<10	14,200	-	<500	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	450	<50	40	<20	-	-	6,300	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	20	60	60	<20	-	-	600	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	40	92,000	91,000	390	-	-	8,100	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	410	140	140	<20	-	-	2,200	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	580	<50	<20	<20	-	-	1,700	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	610	270	270	<20	-	-	2,600	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	40	<50	<20	<20	-	-	3,300	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	1,100	<50	<20	<20	-	-	2,600	-	-	<1	<1	<1	<1	4	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	-	-	-	-	150	80	80	<20	-	-	1,000	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	200	100	100	<20	-	-	300	-	-	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1,300	<50	-	3,900	-	<20	<20	5,100	-	5,100	-	680	-	-	-	-	-	-	-	-	-	-	-
-	-	400	<50	-	4,700	-	40	<20	5,100	-	5,100	-	100	-	-	-	-	-	-	-	-	-	-	-
-	-	-	80	-	3,700	-	70	<20	5,700	-	5,600	-	280	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	<50	-	3,100	-	-	-	6,500	-	6,500	-	140	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	5,900	-	<20	<20	5,900	-	5,600	-	380	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	5,500	-	<20	<20	5,400	-	5,400	-	470	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	<50	-	5,000	-	<20	<20	4,600	-	4,600	-	90	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	5,800	-	<20	<20	7,200	-	7,200	-	890	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	5,000	-	<20	<20	5,500	-	5,500	-	100	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1,200	610	-	480	-	610	<20	2,300	-	1,700	-	520	-	-	-	-	-	-	-	-	-	-	-
-	-	1,000	220	-	430	-	220	<20	1,600	-	1,400	-	160	<1	<1	<1	<1	-	-	-	-	-	-	-
-	-	-	70	-	480	-	70	<20	2,400	-	2,300	-	1,300	-	-	-	-	-	-	-	-	-	-	-
-	-	-	60	-	250	-	-	-	700	-	600	-	380	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	60	-	440	-	50	<20	500	-	500	-	60	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	350	-	30	<20	500	-	500	-	190	-	-	-	-	-	-	-	-	-	-	-
-	-	-	90	-	250	-	80	<20	500	-	400	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	170	-	50	-	170	<20	200	-	<200	-	360	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	300	<50	-	180	-	30	<20	500	-	500	-	120	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	620	70	60	10	1,100	-	1,000	-	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	300	<50	-	5,200	-	<20	<20	5,400	-	5,400	-	160	-	-	-	-	-	-	-	-	-	-	-
-	-	200	120	-	1,700	-	110	<20	2,000	-	1,900	-	<50	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	4,100	-	20	<20	4,200	-	4,200	-	90	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	<50	-	6,700	-	-	-	7,800	-	7,800	-	130	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	8,200	-	<20	<20	8,200	-	6,900	-	220	<1	<1	<1	<1	11	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	7,100	-	<20	<20	7,300	-	7,300	-	1,000	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	6,400	-	<20	<20	5,800	-	5,800	-	70	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	7,700	-	<20	<20	7,700	-	7,700	-	520	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	800	<50	-	7,800	-	<20	<20	8,600	-	8,600	-	150	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1,800	400	-	180	-	400	<20	2,400	-	2,000	-	650	-	-	-	-	-	-	-	-	-	-	-
-	-	1,800	380	-	190	-	380	<20	2,300	-	2,000	-	300	<1	<1	<1	<1	-	-	-	-	-	-	-
-	-	200	<50	-	120	-	50	<20	300	-	300	-	60	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	110	-	<20	<20	200	-	<200	-	<50	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	70	-	-	-	300	-	300	-	100	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	100	-	<20	<20	200	-	200	-	<100	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	180	-	50	-	180	<20	<200	-	<200	-	70	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	<50	-	80	-	<20	<20	300	-	300	-	80	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	160	-	30	<20	<200	-	<200	-	340	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	400	2,500	-	60	-	2,400	50	2,900	-	400	-	160	<1	<1	<1	<1	<3	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1,200	<50	-	1,500	-	<20	<20	2,700	-	2,600	-	330	-	-	-	-	-	-	-	-	-	-	-
-	-	200	<50	-	2,000	-	<20	<20	2,200	-	2,200	-	60	<1	<1	<1	<1	-	-	-	-	-	-	-
-	-	-	<500	-	2,100	-	<200	<200	2,000	-	<2,000	-	100	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,300	-	-	-	2,600	-	2,600	-	130	<1	<1	<1	<1	<3	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,400	-	<20	<20	2,400	-	1,900	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,400	-	<20	<20	2,300	-	2,300	-	70	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	<2,500	-	2,500	-	<1,000	<1,000	1,500	-	1,500	-	50	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,200	-	<20	<20	2,600	-	2,600	-	320	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	200	<50	-	2,200	-	<20	<20	2,500	-	2,500	-	50	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	2,300	-	<20	<20	2,500	-	2,500	-	40	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	900	<50	-	50	-	30	<20	1,000	-	1,000	-	4,900	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	<10	-	<20	<20	<200	-	<200	-	400	<1	<1	<1	<1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	<10	-	<20	<20	<200	-	<200	-	270	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	40	-	<20	<20	<200	-	<200	-	750	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	<10	-	30	<20	<200	-	<200	-	360	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	20	-	<20	<20	1,500	-	1,500	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	30	-	<20	<20	7,900	-	7,900	-	110	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	2,400	<50	-	3,900	-	<20	<20	6,300	-	6,300	-	5,100	<1	<1	<1	<1	-	-	-	-	-	-
-	-	500	540	-	2,300	-	440	110	3,300	-	2,800	-	760	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<500	-	2,600	-	<200	<200	3,900	-	3,900	-	2,000	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	70	-	2,400	-	40	30	2,600	-	2,500	-	180	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	2,200	-	1,200	-	1,900	290	3,700	-	1,500	-	180	-	-	-	-	-	-	-	-	-	-
-	-	-	970	-	1,900	-	970	<20	3,100	-	2,100	-	270	-	-	-	-	-	-	-	-	-	-
-	-	-	600	-	1,900	-	590	<20	4,400	-	3,800	-	940	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	1,400	310	-	1,800	-	240	70	3,500	-	3,200	-	830	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	300	<50	-	860	-	<20	<20	1,200	-	1,200	-	80	-	-	-	-	-	-	-	-	-	-
-	-	400	<50	-	740	-	<20	<20	1,800	-	1,100	-	170	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<500	-	2,300	-	<200	<200	1,700	-	1,700	-	80	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	3,200	-	-	-	3,600	-	3,600	-	80	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	3,600	-	<20	<20	3,400	-	3,400	-	190	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	3,500	-	20	<20	3,500	-	3,500	-	200	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,800	-	<20	<20	3,100	-	3,100	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	3,800	-	<20	<20	5,100	-	5,100	-	130	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	280	-	3,600	-	30	260	4,000	-	3,700	-	50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	400	<50	-	740	-	<20	<20	1,200	-	1,200	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	2,400	-	<20	<20	2,500	-	2,500	-	180	<1	<1	<1	<1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	12,000	-	<20	<20	70,000	-	70,000	-	2,100	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	70	-	13,000	-	-	-	18,000	-	18,000	-	910	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	5,700	-	<20	<20	5,300	-	5,300	-	500	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	4,000	-	<20	<20	4,300	-	4,300	-	350	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	2,500	-	560	-	1,200	1,300	3,200	-	700	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,000	-	<20	<20	3,100	-	3,100	-	20	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	50	-	2,000	-	<20	50	2,000	-	2,000	-	180	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	800	50	-	990	-	50	<20	1,800	-	1,800	-	240	-	-	-	-	-	-	-	-	-	-
-	-	200	<50	-	910	-	<20	<20	1,100	-	1,100	-	180	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	980	-	<20	<20	2,700	-	2,700	-	460	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

-	-	-	100	-	990	-	90	<20	1,200	-	1,100	-	80	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	930	-	30	<20	900	-	900	-	80	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	600	-	570	-	600	<20	1,000	-	400	-	110	-	-	-	-	-	-	-	-	-	-
-	-	-	460	-	400	-	460	<20	1,100	-	700	-	20	-	-	-	-	-	-	-	-	-	-
-	-	800	11,000	-	60	-	11,000	70	12,000	-	900	-	<50	<1	<1	<1	<1	-	-	-	-	-	-
-	-	1,200	13,000	-	30	-	13,000	<20	14,000	-	1,200	-	100	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	5,900	-	840	-	5,600	330	6,800	-	900	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	8,600	-	20	-	-	-	8,600	-	<500	-	70	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	1,600	-	1,500	-	1,600	<20	3,100	-	1,400	-	150	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	50	-	1,800	-	50	<20	1,800	-	1,800	-	140	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	1,900	-	<20	<20	1,600	-	1,600	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	2,500	-	<20	<20	2,700	-	2,700	-	20	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	3,000	-	30	<20	3,000	-	3,000	-	20	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	320	-	470	-	190	130	800	-	500	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	500	2,600	-	170	-	2,400	220	3,300	-	700	-	140	<1	<1	<1	<1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<500	-	660	-	<200	<200	600	-	600	-	150	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	750	-	-	-	800	-	800	-	50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	<1,000	-	760	-	<400	<400	800	-	800	-	180	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	840	-	<20	<20	800	-	700	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	1,400	-	<20	<20	800	-	800	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	<50	-	760	-	<20	<20	1,200	-	1,200	-	60	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	860	-	<20	<20	1,200	-	1,100	-	50	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	970	-	<20	<20	1,000	-	1,000	-	30	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	160	-	580	-	160	<20	900	-	700	-	<50	<1	<1	<1	<1	-	-	-	-	-	-
-	-	300	90	-	400	-	90	<20	800	-	700	-	60	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	190	-	350	-	190	<20	800	-	600	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	540	-	-	-	800	-	800	-	70	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	<50	-	360	-	<20	<20	400	-	<200	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	550	-	<20	<20	600	-	600	-	100	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	780	-	<20	<20	900	-	900	-	100	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	1,100	-	<20	<20	1,200	-	1,200	-	270	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	<50	-	830	-	<20	<20	900	-	900	-	260	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	900	-	<20	<20	900	-	900	-	30	-	-	-	-	-	-	-	-	-	-
-	-	<200	<50	-	210	-	<20	<20	200	-	<200	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	310	-	20	30	400	-	300	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	270	-	-	-	400	-	400	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	300	-	<20	<20	300	-	300	-	100	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	230	-	<20	<20	200	-	200	-	<50	-	-	-	-	-	-	-	-	-	-
-	-	-	<50	-	660	-	<20	<20	<200	-	<200	-	<50	<1	<1	<1	<1	<3	-	-	-	-	-
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-	-	-	80	-	260	-	80	<20	400	-	300	-	180	-	-	-	-	-	-	-	-	-	-
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-	-	<200	<50	-	300	-	<20	<20	300	-	300	-	20	<1	<1	<1	<1	<3	-	-	-	-	-
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[illegible]

80 of 108

81 of 108

82 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	<50	-	-	<0.05	<0.2	-	<0.05	<1	<0.5	-	<0.05	<2
-	-	-	-	-	-	-	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	<10	<10	-	<0.1	<2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<0.01	<0.1	-	<0.01	-	<0.1	-	<0.01	<0.1
-	-	-	-	-	-	130	-	-	-	-	<0.2	16	-	0.1	-	-	-	49	-	<10	-	12	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	<0.01	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	<1	<10	-	<0.1	<2
-	-	-	-	-	-	-	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	-	<10	-	<0.1	<2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	21	-	-	-	-	<0.2	<1	<10	<0.1	-	<0.01	<4	7	<0.01	-	<0.1	<1	<0.01
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-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	<0.05	<0.5	-	<0.05	<10	<0.5	-	<0.05	<0.5
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-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<0.01	<0.5	-	<0.01	<10	<0.1	-	<0.01	<0.5
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-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
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-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
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-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	130	-	-	-	-	<0.2	3	-	<0.1	-	-	250	-	-	-	2	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	<0.05	<0.5	-	<0.05	-	<0.5	-	<0.05	<0.5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

16	COFFEY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	<1	<10	-	<0.1	<2
-	-	-	-	-	140	<0.01	-	-	-	-	0.3	1	<10	<0.1	-	<0.01	<1	190	<0.01	-	<0.01	<1	<0.01
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	25	-	-	-	-	-	<0.2	<1	<10	<0.1	-	<0.01	<4	11	<0.01	<10	<0.1	14	<0.01
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<0.01	<0.5	-	<0.01	<10	<0.1	-	<0.01	<0.5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	33	<0.01	-	-	-	-	<0.2	2	-	<0.1	-	-	-	19	-	-	-	<1	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<0.01	<0.1	-	<0.01	<10	<0.1	-	<0.01
-	-	-	-	-	100	-	-	-	-	-	<0.2	3	-	<0.1	-	-	-	15	-	-	-	14	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	30	<0.01	-	-	-	-	<0.2	2	-	<0.1	-	-	-	9	-	-	-	<1	-
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-	-	-	-	-	9	-	-	-	-	-	<0.2	<1	-	<0.1	-	-	-	4	-	-	-	<1	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<0.01	<0.5	-	<0.01	<10	<0.1	-	<0.01
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
-	-	-	-	-	-	<0.01	-	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	<1	<10	-	<0.1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
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-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
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-	-	-	-	-	-	<0.01	-	-	-	-	-	-	<100	-	-	<0.1	<2	-	<0.1	<10	<10	-	<0.1
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-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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[illegible]

86 of 108

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

[illegible]

[illegible]

89 of 108

90 of 108

[illegible]

92 of 108

[illegible]

94 of 108

95 of 108

96 of 108

[illegible]

98 of 108

99 of 108

100 of 108

101 of 108

102 of 108

[illegible]

104 of 108



Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

WSA SBT

[illegible]

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Table D2: Baseline Groundwater Results - Airport Portal to Aerotropolis Station

Annexure E EPL# 21672



Environment Protection Licence

Licence - 21672

Licence Details

Number:	21672
Anniversary Date:	30-May

Licensee

CPB CONTRACTORS PTY LIMITED

40 MILLER ST

NORTH SYDNEY NSW 2060

Premises

SYDNEY METRO WESTERN SYDNEY AIRPORT STATION BOX
AND TUNNELLING PACKAGE – ST MARYS TO ORCHARD
HILLS AND BRINGELLY TO AEROTROPOLIS

ST MARYS TO ORCHARD HILLS AND BRINGELLY TO
AEROTROPOLIS

ST MARYS NSW 2760

Scheduled Activity

Railway activities - railway infrastructure construction

Fee Based Activity

Railway infrastructure construction ($\geq 50,000\text{T}$ & track to be
constructed $\leq 10\text{km}$)

Scale

> 2000000 Remaining extraction or
processing

Contact Us

NSW EPA

6 Parramatta Square

10 Darcy Street

PARRAMATTA NSW 2150

Phone: 131 555

Email: info@epa.nsw.gov.au

Locked Bag 5022

PARRAMATTA NSW 2124

Environment Protection Licence

Licence - 21672

INFORMATION ABOUT THIS LICENCE	4
Dictionary	4
Responsibilities of licensee	4
Variation of licence conditions	4
Duration of licence	4
Licence review	4
Fees and annual return to be sent to the EPA	4
Transfer of licence	5
Public register and access to monitoring data	5
1 ADMINISTRATIVE CONDITIONS	6
A1 What the licence authorises and regulates	6
A2 Premises or plant to which this licence applies	6
A3 Information supplied to the EPA	7
A4 Other administrative conditions	7
2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1 Location of monitoring/discharge points and areas	7
3 LIMIT CONDITIONS	8
L1 Pollution of waters	8
L2 Concentration limits	9
L3 Noise limits	11
L4 Blasting	12
L5 Hours of operation	12
L6 Potentially offensive odour	16
4 OPERATING CONDITIONS	16
O1 Activities must be carried out in a competent manner	16
O2 Maintenance of plant and equipment	16
O3 Dust	16
O4 Processes and management	17
O5 Waste management	17
5 MONITORING AND RECORDING CONDITIONS	19
M1 Monitoring records	19
M2 Requirement to monitor concentration of pollutants discharged	19
M3 Testing methods - concentration limits	20
M4 Environmental monitoring	21
M5 Weather monitoring	21



Environment Protection Licence

Licence - 21672

M6	Recording of pollution complaints	22
M7	Telephone complaints line	22
6	REPORTING CONDITIONS	23
R1	Annual return documents	23
R2	Notification of environmental harm	24
R3	Written report	24
R4	Other reporting conditions	25
7	GENERAL CONDITIONS	26
G1	Copy of licence kept at the premises or plant	26
G2	Contact number for incidents and responsible employees	27
G3	Other general conditions	27
8	SPECIAL CONDITIONS	27
E1	Community Agreements	27
E2	Surface Water Monitoring	29
E3	Special Dictionary	30
E4	WTP Proof of Performance	31
DICTIONARY		32
	General Dictionary	32

Environment Protection Licence

Licence - 21672

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 21672

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

CPB CONTRACTORS PTY LIMITED
40 MILLER ST
NORTH SYDNEY NSW 2060

subject to the conditions which follow.

Environment Protection Licence

Licence - 21672

1 Administrative Conditions

A1 What the licence authorises and regulates

- A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Railway activities - railway infrastructure construction	Railway infrastructure construction ($\geq 50,000\text{T}$ & track to be constructed $\leq 10\text{km}$)	> 2000000 Remaining extraction or processing

A2 Premises or plant to which this licence applies

- A2.1 The licence applies to the following premises:

Premises Details
SYDNEY METRO WESTERN SYDNEY AIRPORT STATION BOX AND TUNNELLING PACKAGE – ST MARYS TO ORCHARD HILLS AND BRINGELLY TO AEROTROPOLIS
ST MARYS TO ORCHARD HILLS AND BRINGELLY TO AEROTROPOLIS
ST MARYS
NSW 2760
SYDNEY METRO WESTERN SYDNEY AIRPORT STATION BOX AND TUNNELLING PACKAGE – ST MARYS TO ORCHARD HILLS AND BRINGELLY TO AEROTROPOLIS

- A2.2 In relation to Condition A2.1, the premises are defined by the most recent premises map(s) held on EPA Electronic File EF22/5394 and approved in writing by the EPA.
- A2.3 Premises map(s) changes are permitted to be altered through this condition. Any proposed variations to the premises must:
- be submitted to the EPA in electronic format for approval;
 - be clearly described on a complete map set containing unique identifiers for revision number, map sheet numbers and issue date;
 - be submitted to the EPA no less than 5 business days prior to the date of the scheduled land portion handover, land portion surrenders, land portion additions or any other changes;
 - be clearly described in writing submitted at the same time as the complete map set;
 - be lawful and permitted under the relevant approval; and
 - if changes to the nature of works are proposed, the licensee must demonstrate any additional environmental impacts in relation to any changes have been considered and can be managed in an appropriate manner.

Environment Protection Licence

Licence - 21672

- A2.4** The most recently approved premises map(s) must be available for public viewing on the licensee's project website or a related website approved in writing by the EPA no more than 5 business days after the approval of the map(s) by the EPA.

The requirements outlined in this condition only come into force when works or activities commence at the licensed premises.

A3 Information supplied to the EPA

- A3.1** Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

- A3.2** Unless specifically stated by another condition of this licence, Environmental Management Plans or systems supplied to the EPA by the licensee do not form part of this licence.

- A3.3** Whenever collecting information from any member of the public, including complaints or consent to out of hours work, a licensee must seek consent from the member of the public for the disclosure of their personal information, and collection by the EPA, or any other NSW government agency.

A4 Other administrative conditions

- A4.1** The EPA must be notified in writing, of the intention to commence works or activities authorised by this licence at the premises for the first time, at least 5 business days prior to the proposed commencement of those works or activities or prior to the commencement of works if they are scheduled to commence within 5 business days of this licence being issued.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1** The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
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Environment Protection Licence

Licence - 21672

1	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Orchard Hills site discharging to South Creek referred to in Condition P1.2
2	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Claremont site discharging to South Creek referred to in Condition P1.2
3	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the St Marys site discharging to South Creek referred to in Condition P1.2
4	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Bringelly site discharging to Badgerys Creek referred to in Condition P1.2
5	Discharge and Monitoring	Discharge and Monitoring	The outlet(s) of the sediment basin(s) on the Aerotropolis site discharging to Thompson Creek referred to in Condition P1.2
6	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Orchard Hills site discharging to South Creek
7	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Claremont site discharging to South Creek
8	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the St Marys site discharging to South Creek
9	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Bringelly site discharging to Badgerys Creek
10	Discharge and Monitoring	Discharge and Monitoring	The outlet of the water treatment plant on the Aerotropolis site discharging to Thompson Creek

P1.2 All licensed monitoring and discharge points referred to in condition P1.1, must be approved by the EPA and identified:

- a) in the premises map(s) most recently submitted and approved in writing by the EPA under condition A2.2; and
- b) in a schedule submitted to the EPA. The schedule, including any proposed updates, must:
 - i. be submitted to the EPA in electronic format no less than 5 days prior to any changes;
 - ii. include unique identifiers consistent with the map(s) required by this condition; and
 - iii. include easting and northing coordinates for all licensed monitoring and discharge points.

P1.3 The premises map(s) and schedule are maintained on electronic file EF22/5394.

3 Limit Conditions

L1 Pollution of waters

Environment Protection Licence

Licence - 21672

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Concentration limits

- L2.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.
- L2.4 Water and/or Land Concentration Limits

POINT 1,2,3,4,5,6,7,8,9,10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	Visible				Not visible

POINT 1,2,3,4,5

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5-8.5
Turbidity	nephelometric turbidity units				50

POINT 6,7,8,9,10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Aluminium	milligrams per litre				0.08
Ammonia	milligrams per litre				0.9

Environment Protection Licence

Licence - 21672

POINT 6,7,9,10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Chromium (VI) Compounds	milligrams per litre				0.001

POINT 6,7

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Copper	milligrams per litre				0.0014

POINT 6

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Electrical conductivity	microsiemens per centimetre				7,000

POINT 6,7,8,9,10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Nitrogen (total)	milligrams per litre				1.72
pH	pH				6.5-8.0
Phosphorus (total)	milligrams per litre				0.14
TSS	milligrams per litre				50
Zinc	milligrams per litre				0.015

POINT 7

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Electrical conductivity	microsiemens per centimetre				8,000

Environment Protection Licence

Licence - 21672

POINT 8

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Chromium (VI) Compounds	milligrams per litre				0.006

POINT 8,9,10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Copper	milligrams per litre				0.002

POINT 8

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Electrical conductivity	microsiemens per centimetre				12,500

POINT 9

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Electrical conductivity	microsiemens per centimetre				13,250

POINT 10

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Electrical conductivity	microsiemens per centimetre				7,750

- L2.5 Exceeding the limits specified in Condition L2.4 of this licence for discharges from the discharge point(s) identified by conditions P1.1 is only permitted if:
- the discharge occurs solely as a result of rainfall measured at the premises exceeding the design rainfall depth value for the corresponding discharge point; and
 - The sediment basins and other erosion and sediment controls corresponding to the discharge point(s) have been designed, constructed, operated and maintained in accordance with condition O4.2 of this licence.

L3 Noise limits

Environment Protection Licence

Licence - 21672

- L3.1** The licensee must minimise noise and vibration impacts at residences and other sensitive land uses. To meet the requirements of this condition the licensee must:
- a) implement the guidance in the Interim Construction Noise Guideline (DEC, 2009) and the Assessing Vibration: a technical guideline (DEC, 2006);
 - b) implement all reasonable and feasible measures to minimise noise impacts in accordance with the Interim Construction Noise Guideline (DEC, 2009); and
 - c) implement vibration mitigation in accordance with the Assessing Vibration: a Technical Guideline (DEC, 2006).
- In this condition, 'reasonable' and 'feasible', in relation to noise management, have the same meaning as defined in the Interim Construction Noise Guideline (DEC, 2009).

- L3.2** When construction activities include 'High Noise Impact Activities and Works' as defined in the special dictionary in this licence, quantitative construction noise assessments must apply a +5dB correction to the measured or predicted level of construction noise at the nearest Noise Sensitive Receiver location before assessment against the Interim Construction Noise Guideline (DECC, 2009) noise management levels.

L4 Blasting

- L4.1** All blasting activities are prohibited on the licensed premises.

L5 Hours of operation

- L5.1** Standard construction hours
- Unless permitted by another condition of this licence, works and activities must:
- a) only be undertaken between the hours of 7:00 am and 6:00 pm Monday to Friday;
 - b) only be undertaken between the hours of 8:00 am and 1:00 pm Saturday; and
 - c) not be undertaken on Sundays or Public Holidays.
- L5.2** High Noise Impact Activities and Works
- Unless permitted by another condition of this licence, any High Noise Impact Activities and Works that exceed the applicable Noise Management Level (NML) at a Noise Sensitive Receiver must only be undertaken:
- a) between 8:00 am and 6:00 pm Monday to Friday;
 - b) between 8:00 am and 1:00 pm Saturday; and
 - c) if high noise impact works are to be conducted continuously and the location of the works means that it is likely to impact the same receivers, then the works must be conducted in continuous blocks of no more than 3 hours, with at least a 1-hour respite between each block of continuous high noise impact work; except as expressly permitted by another condition of this licence.

Note: For the purposes of this condition 'continuous' includes any period where there is a less than 1-hour respite between ceasing and recommencing of any work that is subject to this condition.

- L5.3** Exemptions to standard construction hours for low noise impact works
- Works and activities may be carried on outside of standard construction hours specified in condition L5.1 if

Environment Protection Licence

Licence - 21672

the works and activities do not cause, when assessed at the boundary of the most affected Noise Sensitive Receiver:

- a) LAeq(15 minute) noise levels greater than 5dB above the day, evening and night Rating Background Level (RBL) as applicable;
- b) LAmax noise levels greater than 15dB above the night RBL for night works;
- c) the preferred continuous or impulsive vibration values greater than those for human exposure to vibration, set out for residences in Table 2.2 in Assessing Vibration: a technical guideline (DEC, 2006); and
- d) the preferred intermittent vibration values greater than those for human exposure to vibration, set out for residences in Table 2.4 in Assessing Vibration: a technical guideline (DEC, 2006).

For the purposes of this condition, the RBLs are those contained in an environmental assessment for the activities subject to this licence prepared under the Environmental Planning and Assessment Act 1979. Alternatively, the licensee may use another RBL determined in accordance with the Noise Policy for Industry (EPA, 2017) and provided to the EPA prior to carrying out any works or activities under this condition.

The notification requirements under condition L5.5 do not apply to this condition.

L5.4 Exemptions to standard construction hours in exceptional circumstances

- a) The licensee may undertake works and activities outside of standard construction hours specified in condition L5.1 for:
 - i. emergency works required to avoid the loss of life or property, or to prevent material harm to the environment; and
 - ii. the delivery of oversized plant, structures or materials determined by the police or other authorised authorities to require special arrangements to transport along public roads.
- b) The licensee must, on becoming aware of the need to undertake emergency works under this condition notify the EPA's Environment Line as soon as practicable and submit a report to the EPA by 4:00 pm on the next business day after the emergency works commenced that describes:
 - i. the cause, time and duration of the emergency;
 - ii. action taken by or on behalf of the licensee in relation to the emergency; and
 - iii. details of any measures taken or proposed to be taken by the licensee to prevent or mitigate against a recurrence of the emergency.

For the purposes of this condition, 'material harm to the environment' has the same meaning as in section 147 of the POEO Act.

Emergency works do not require a notification under condition L5.5.

L5.5 Works outside of standard construction hours - Notification

The licensee must notify potentially affected Noise Sensitive Receivers of works outside of standard construction hours unless notification under this condition is not required as specified in another condition of this licence.

- a) The notification must:
 - i. be given not less than 5 calendar days and not more than 14 calendar days before those works are to be undertaken, unless otherwise agreed with the affected community and notified to the EPA;
 - ii. be undertaken by letterbox drop, email, text message or other targeted and equivalent method; and
 - iii. be detailed on the project website or other relevant website notified to the EPA.
- b) The notification required by this Condition must:

Environment Protection Licence

Licence - 21672

- i. clearly outline the reason that the work is required to be undertaken outside the hours specified in condition L5.1;
- ii. include a diagram that clearly identifies the location of the proposed works in relation to nearby cross streets and local landmarks;
- iii. include details of the date, timing and relevant time restrictions that apply to the proposed works;
- iv. clearly outline in plain English, the location, nature, scope and duration of the proposed works;
- v. detail the expected noise impact of the works on Noise Sensitive Receivers;
- vi. clearly state how complaints may be made and additional information obtained;
- vii. include the number of the telephone complaints line required by condition M7.1, an after hours contact phone number specific to the works undertaken outside the hours specified in condition L5.1, and the project website address; and
- viii. include consideration of culturally and linguistically diverse Noise Sensitive Receivers where required.

L5.6 The licensee must make all reasonable and feasible efforts to coordinate all works outside of standard construction hours with any neighbouring concurrent construction works that have the potential to impact the same Noise Sensitive Receivers. The licensee must ensure Respite Periods are being achieved as much as is reasonably practicable.

L5.7 Condition L5.6 does not apply to low impact noise work permitted by condition L5.3 or emergency works permitted by L5.4 of this licence.

L5.8 Works outside of standard construction hours

Under this condition, works and activities may be undertaken outside of standard construction hours specified in condition L5.1 and L5.2, but only if they are required in relation to one or more of the following:

- a) carrying on those works and activities during standard construction hours would result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2018 "Risk Management";
- b) the Relevant Road Network Operator has advised the licensee in writing that carrying out the works and activities during standard construction hours would result in a high risk to road network operational performance;
- c) a relevant utility service operator has advised the licensee in writing that carrying out the works and activities during standard construction hours would result in a high risk to the operation and integrity of the utility network;
- d) the TfNSW Transport Management Centre (or other road authority) has refused to issue a road occupancy licence during standard construction hours; or
- e) Sydney Trains (or other rail authority) requires a rail possession for the activities to be performed outside of standard construction hours.

L5.9 Works outside of standard construction hours - Regulatory Requirements

In undertaking any works and activities outside of standard construction hours under condition L5.8, the licensee must comply with the following:

- a) Prepare a construction noise and vibration impact assessment in accordance with the Interim Construction Noise Guideline (DEC, 2009) that is to include:
 - i. a description of the proposed works and activities outside of standard construction hours;
 - ii. predictions of LAeq (15 minute) dB noise levels at noise sensitive receivers from these works and activities, where noise levels are predicted to be greater than those permitted under condition L5.3; and
 - iii. a monitoring plan to validate the noise predictions, based on monitoring at the boundary of representative sensitive receivers during noise generating activities that are representative of the works and activities,

Environment Protection Licence

Licence - 21672

including during the period/s predicted to have the highest noise level impacts.

b) Undertake noise monitoring in accordance with the monitoring plan required by condition L5.9(a)(iii).

c) Only undertake activities between the hours of 6:00pm on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays and 7:00am the following day (unless permitted by another condition of this licence).

d) Activities are not to be undertaken between the hours of 6:00pm on Saturdays, Sundays or Public Holidays and 7:00am the following day (unless permitted by another condition of this licence).

e) Ensure that works and activities do not result in noise levels exceeding those specified in condition L5.3 at the same noise sensitive receivers (unless specified in another condition of this licence) on more than:

i. 2 consecutive evenings and/or nights at any time; and

ii. 3 evenings and/or nights per week; and

iii. 10 evenings and/or nights per month.

f) Undertake any high noise impact works before 12:00 am (midnight) where reasonable and feasible.

g) Where high noise impact activities are undertaken, the respite provisions as per the requirements of condition L5.2(c) do not apply provided that all High Noise Impact Activities and Works are undertaken prior to 12:00 am (midnight).

h) Where high noise impact activities are undertaken after 12:00 am (midnight), the licensee is required to submit a written report to the EPA within 2 business days of the activity outlining the justification for continuing high noise impact works after midnight and the reasonable and feasible mitigation measures that were implemented to address these night time impacts.

i) Upon request of an authorised officer, the licensee must provide within 5 business day:

i. the construction noise and vibration impact assessment required by condition L5.9(a);

ii. noise monitoring results required by condition L5.9(b);

iii. written evidence demonstrating the works are necessary and permitted under condition L5.8; and/or

iv. any other relevant information or records requested by the EPA.

i) the notification requirements under condition L5.5 apply to this condition.

L5.10 24-Hour works

The following works are permitted to be undertaken 24 hours a day, 7 days per week:

(a) Tunnelling and ancillary support activities (excluding cut and cover tunnelling and surface works not directly supporting tunnelling); and

(b) grout batching at the Orchard Hills ancillary facility; and

(c) Delivery of material that is required to be delivered outside of standard construction hours in condition L5.1 to directly support tunnelling activities, except between the hours 10:00pm and 7:00am to/from the Orchard Hills ancillary facility.

(d) Haulage of spoil generated through tunnelling except between the hours of 10:00pm and 7:00am to/from the Orchard Hills ancillary facility; and

(e) work within an acoustic shed where there is no exceedance of noise levels under Low impact circumstances identified in condition L5.3,

(f) tunnel and underground station box fit-out works

Notes:

1. Tunnelling does not include station box excavation

2. Tunnelling ancillary support activities includes logistics support and material handling and delivery.

L5.11 Concrete works associated with shaft and station construction, including concrete pouring, finishing and cleaning, are permitted to be undertaken outside of standard construction hours specified in L5.1 provided that:

a) Works are required to achieve compliance with overarching project technical requirements,

b) Works had already begun within a reasonable time prior to end of standard construction hours,

c) OOH works are undertaken from 6pm to 10pm, Monday to Friday and 1pm to 4pm on Saturday,

d) Concreting activities (e.g. using concrete pump, vibrators, concrete trucks, etc) must be

Environment Protection Licence

Licence - 21672

- completed before 8pm on Monday to Friday,
- e) Concrete finishing works (e.g. power floats, hand tools) must be completed before 10pm on Monday to Friday,
- f) Works are permitted to occur until 31 July 2023.

L6 Potentially offensive odour

- L6.1 No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.
This includes:
- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
 - b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
- a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Dust

- O3.1 All activities occurring at the premises must be carried out in a manner that will minimise the generation and emission of air pollution from the premises as much to the greatest extent practicable.
- O3.2 The premises must be maintained in a condition which minimises the generation and emission of air pollution from the premises to the greatest extent practicable.
- O3.3 The licensee must implement all reasonable and feasible measures to demonstrate compliance with condition O3.1 and O3.2.
- O3.4 Trucks entering and leaving the premises that are carrying loads of material with the potential to generate dust

Environment Protection Licence

Licence - 21672

must be covered at all times, except during loading and unloading

O4 Processes and management

- O4.1 The licensee must implement all feasible and reasonable erosion and sediment controls as may be necessary throughout the life of works and activities to minimise sediment leaving the premises.
- O4.2 The licensee must ensure erosion and sediment controls are designed, constructed, operated and maintained consistent with the principle and practices of industry best practice, including:
- a) Managing Urban Stormwater – Soils and Construction, Volume 2D, Main Road Construction (DECC, 2008), to be read and used in conjunction with Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom, 2004);
 - b) Best Practice Erosion and Sediment Control (IECA 2008); and
 - c) other industry best practice documents if it can demonstrate the guidance will provide improved or equivalent outcomes for the environment and meet the requirements of condition L1.1 of this licence.
- O4.3 The licensee must ensure:
- a) all vehicular access points to the premises are designed, constructed, maintained and stabilised to minimise vehicles tracking materials onto public roads and roads outside the premises as much as is reasonable and feasible;
 - b) vehicle, motorised plant and equipment movements onto or off the premises minimise the deposition of any material onto the surface of roads outside of the premises;
 - c) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer, motorised plant and equipment leaving the premises, is removed to the greatest extent practicable before it leaves the premises; and
 - d) road surfaces subject to any tracking of material by vehicles leaving the premises must be cleaned as required to ensure compliance with a) and b) of this condition and condition L1.1 of this licence.
- O4.4 The licensee must:
- a) ensure the design storage capacity of any sediment basin installed on the premises is reinstated within the design management period following the cessation of a rainfall event that causes runoff to occur on or from the premises; and
 - b) keep records of the available water and sediment storage capacities in each sediment basin and provide to an authorised officer upon request.
- O4.5 The licensee must ensure that sampling point(s) for water discharged from the sediment basin(s) are provided and maintained in an appropriate condition to permit:
- a) the clear identification of each sediment basin and discharge point;
 - b) the collection of representative samples of the water discharged from the sediment basin(s); and
 - c) access to the sampling point(s) at all times by an authorised officer of the EPA.

O5 Waste management

- O5.1 The licensee must prepare and provide to the EPA a Construction Waste Management Plan (CWMP) for each stage of the project or where due to project variables the CWMP requires updating. The CWMP must be provided prior to the commencement of each stage of the project and include (at a minimum):

Environment Protection Licence

Licence - 21672

- a) the waste types and likely or estimated quantities for each waste type to be generated on the premises;
- b) details of the proposed sampling, testing and other methods to be used to characterise and classify waste to be generated on the premises for waste management and transport purposes;
- c) anticipated or known waste classification and characterisation of waste in accordance with the Waste Classification Guidelines Part 1: Classifying waste (EPA, 2014);
- d) details of how and where the waste is anticipated to be reused, recycled, stored or disposed of;
- e) the proposed methods and frequencies for conducting compliance checks under condition O5.4 and
- f) the licensee must consider the guidance in Construction and demolition waste: a management toolkit (EPA, 2019) when preparing and implementing the CWMP.

Note: the requirements of this condition may be addressed in another plan or document provided to the EPA and referenced in the CWMP to satisfy the requirements of this condition.

- O5.2** The licensee must keep detailed records of waste generated, received or removed from the premises that includes (at a minimum):
- a) details of all waste transporters and the addresses and facility/business names of destination location(s) for all waste generated and transported off the premises for any purpose (including recycling, reuse, processing, treatment and disposal);
 - b) documented evidence (such as a licence) from each place of disposal that they can lawfully receive and manage (store, process, reuse, dispose) the types of waste proposed to be transported there;
 - c) details of all waste received on the premises or transported off the premises that is subject to a Resource Recovery Order and/or Exemption under the Protection of the Environment Operations (Waste) Regulation 2014, and demonstration that the waste meets the requirements of the Order and/or Exemption;
 - d) legible copies of all documents/records evidencing that all waste transported from the premises was taken to and received at a facility/premises that lawfully accept and process the waste as intended;
 - e) keep legible copies of any waste tracking documentation required for the offsite transport of the waste to demonstrate the waste was tracked in accordance with NSW legislation;
 - f) comparisons showing the proposed waste quantities and waste types documented in the CWMP against the actual waste quantities and waste types; and
 - g) comparisons showing intended reuse, recycling or disposal locations documented in the CWMP against actual reuse, recycling and disposal locations.
- O5.3** The CWMP must be implemented for the duration of licensed activities, and a copy of the current CWMP, historic versions of the CWMP and all records required by condition O5.2 must be kept on the premises for the duration of the licence and provided to an EPA officer upon request.
- O5.4** The licensee must conduct compliance checks pursuant to the compliance check frequencies provided in the CWMP. The compliance checks must be conducted while licenced waste activities are being undertaken to ensure that all waste is being managed, transported, reused, recycled or disposed in a lawful manner. The compliance checks must take the form of one or more of the following:
- a) desktop investigations, such as:
 - i. contacting reuse, recycling or disposal facilities directly;
 - ii. reviewing waste disposal dockets and waste transport tracking documentation and requirements;
 - iii. reviewing waste characterisation and classification information;
 - iv. reviewing exemption requirements against particular loads of waste;
 - v. reviewing environment protection licences, authorisations or approvals of facilities that receive waste generated by the project); or
 - b) site inspections to non-licenced reuse, recycling or disposal locations; or

Environment Protection Licence

Licence - 21672

c) any other method agreed in writing by the EPA.

All compliance checks conducted under this condition must be recorded and provided to an authorised officer upon request.

O5.5 The licensee must not cause, permit or allow any waste generated outside the licensed premises and Sydney Metro Western Sydney Airport Project including on-airport sites to be received at the licensed premises, except:

- a) virgin excavated natural material;
- b) as expressly permitted by a condition of this licence; or
- c) a resource recovery order and/or resource recovery exemption under the Protection of the Environment Operations (Waste) Regulation 2014.

Note: For the purposes of condition O5.5 and condition O5.6 the "Sydney Metro Western Sydney Airport Project including on-airport sites" refers to the site within the boundary marked in orange in Figure 4 on Page 19 of the *Western Sydney Airport - Airport Plan - Department of Infrastructure, Transport, Regional Development and Communications (September 2021)*, held on EPA Electronic File DOC22/399379-3

O5.6 Excavated material suitable for re-use within the premises may be transported to another part of the premises or from the Sydney Metro Western Sydney Airport Project including on airport sites, to the premises by road.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Environment Protection Licence

Licence - 21672

M2.2 Water and/ or Land Monitoring Requirements

POINT 1,2,3,4,5

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	Visible	Special Frequency 1	Visual Inspection
pH	pH	Special Frequency 1	Probe
Turbidity	nephelometric turbidity units	Special Frequency 1	Probe

POINT 6,7,8,9,10

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Monthly during discharge	Grab sample
Ammonia	milligrams per litre	Monthly during discharge	Grab sample
Chromium (VI) Compounds	milligrams per litre	Monthly during discharge	Grab sample
Copper	milligrams per litre	Monthly during discharge	Grab sample
Electrical conductivity	microsiemens per centimetre	Monthly during discharge	Grab sample
Nitrogen (total)	milligrams per litre	Monthly during discharge	Grab sample
Oil and Grease	Visible	Monthly during discharge	Visual Inspection
pH	pH	Monthly during discharge	Probe
Phosphorus (total)	milligrams per litre	Monthly during discharge	Grab sample
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample
Zinc	milligrams per litre	Monthly during discharge	Grab sample

M2.3 For the purposes of Condition M2.2 and the Table thereto, 'Special Frequency 1' means:

- less than 24 hours prior to a controlled discharge and daily for any continued controlled discharge, when it is safe to do so; and
- when rainfall causes a discharge from a sediment basin which has not been emptied within the design management period following cessation of a rainfall event, when it is safe to do so.

M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

Environment Protection Licence

Licence - 21672

M4 Environmental monitoring

- M4.1** All noise and vibration monitoring for the purposes of determining compliance with the conditions of this licence must be undertaken by a Competent Person as defined in the special dictionary of this licence.
- M4.2** All noise monitoring for the purposes of determining compliance with the conditions of this licence must consider and be generally undertaken in accordance with;
- (a) Australian Standard AS 1055: 2018 Acoustics - Description and measurement of environmental noise; and
 - (b) the compliance monitoring guidance provided in the chapter 7 'Monitoring Performance' of the Noise Policy for Industry (EPA, 2017).
- M4.3** All vibration monitoring must be:
- a) undertaken in accordance with the technical guidance provided in the Assessing Vibration: a technical guideline (DEC, 2006); and
 - b) assessed and reported against the acceptable and maximum values of human exposure to vibration set out in Tables 2.2 and 2.4 of this guideline.
- M4.4** The licensee must undertake noise and vibration monitoring as directed by an authorised officer of the EPA. Where the monitoring is requested to take place on private land (for example a residential property) the licensee must request permission to access the premises in advance and keep a record of permission requests and responses. If a licensee is unable to obtain permission, the licensee must undertake the monitoring at an indicative location where possible and they must provide the response (including any nil response) to the EPA.
- M4.5** Additional Monitoring Conditions
- The licensee must undertake monitoring, sampling, video recording and/or take photographs:
- a) if the EPA or licensee reasonably suspects that an event has occurred at the premises or in connection with the carrying out of the activities that has caused, is causing, is likely to cause or has the potential to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies);
 - b) as soon as practicable; and
 - c) as directed by an authorised officer.

M5 Weather monitoring

- M5.1** The licensee must monitor and record temperature, wind direction, wind velocity and rainfall at either the project weather station, or through analysis of equivalent weather information obtained from the Australian Bureau of Meteorology. Monitoring must:
- a) be representative of the premises;
 - b) commence prior to any works that may cause sediment to leave the premises; and
 - c) continue to be operated until soil disturbance activities cease at the premises and the site has been stabilised.
- The rainfall monitoring data collected in compliance with this condition can be used to determine compliance with condition L2.5

Environment Protection Licence

Licence - 21672

M6 Recording of pollution complaints

- M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M6.2 The record must include details of the following:
- a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

- M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M7.3 The preceding two conditions do not apply until two weeks after the date of the issue of this licence.
- M7.4 For the purposes of condition M7.1, the telephone complaints line is operated by a third-party provider. The licensee must have staff available to respond to complaints during hours when works are occurring.
- M7.5 Unless otherwise undertaken by the project proponent, the licensee must undertake the following community notification activities:
- a) include on the project website or other relevant website information on:
 - i. the nature, location and estimated construction time of the works;
 - ii. what works are expected to exceed Interim Construction Noise Guideline (DECC, 2009) noise management levels and the noise control measures to be implemented;
 - iii. how members of the public can make a complaint on the telephone complaints line and online;
 - iv. the after hours contact telephone number for any out of hours works permitted by this licence; and
 - v. how the complaints will be processed;
 - b) public notices in local newspapers, including community language newspapers including the information required by part a) of this condition;
 - c) clear signage at the boundary of each worksite that contains both the telephone complaints line number

Environment Protection Licence

Licence - 21672

and the project website details;

d) ongoing additional community notification must be undertaken if:

- i. new sensitive receivers are affected by noise, vibration or other construction impacts; or
- ii. the details notified to the community in accordance with this condition materially change.

M7.6 Noise and Vibration Complaints

a) the licensee must commence investigation of noise and vibration complaints:

- i. within two hours of the complaint being made; or
- ii. in accordance with any documented complaint management agreement between the licensee and the complainant.

b) the licensee must offer to the complainant to undertake attended noise or vibration monitoring at their premises if:

- i. any investigation referred to in this condition identifies works or activities being undertaken on the licensed premises as the likely source of the complaint; and
- ii. the licensee is not in possession of noise monitoring data representative of the complainants location and of the subject works and activities being undertaken on the licensed premises.

c) if the occupant of the dwelling or management personnel of a Noise Sensitive Receiver (other than a dwelling) accepts the offer of attended noise or vibration monitoring the licensee must undertake that attended monitoring:

- i. as soon as practicable; or
- ii. at a time agreed with the complainant.

d) The licensee must, in respect of each complaint made, advise each complainant of the results of its investigation of their complaint and any proposed remedial action within a reasonable period of time.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- 1. a Statement of Compliance,
- 2. a Monitoring and Complaints Summary,
- 3. a Statement of Compliance - Licence Conditions,
- 4. a Statement of Compliance - Load based Fee,
- 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
- 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
- 7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Environment Protection Licence

Licence - 21672

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
- and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm

Environment Protection Licence

Licence - 21672

occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

R4.1 Daily Complaints Reports

- a) The licensee must submit by 4:00 pm each business day a report to the EPA that provides details of all complaints relating to activities regulated by this licence received on the telephone complaints line required by Condition M7.1 or through any other means.
- b) The report must be:
 - i. provided in a format approved in writing by the EPA;
 - ii. submitted to the email address nominated by the EPA; and
 - iii. include the complaints received in the previous 24 hours to 12pm;
- c) The licensee is not required to submit a report:
 - i. for any reporting period during which no complaints have been received;
 - ii. that would otherwise be required to be submitted on a Saturday, Sunday or public holiday. It must instead be submitted not later than 4:00pm on the next business day.

R4.2 Noise and Vibration Reports

- a) Upon request of an authorised officer, the licensee must submit a Preliminary Investigation Report to the EPA in respect of any noise or vibration monitoring undertaken in accordance with the requirements of Condition M4.2.
- b) The Preliminary Investigation Report must be submitted to the EPA by 4:00 pm on the afternoon of the next working day following any noise or vibration monitoring or other time as agreed in writing by EPA.
- c) The Preliminary Investigation Report must include:
 - i. numerical and/or graphical representation of the noise and vibration monitoring results including both ambient noise levels and the level of noise from activities on the premises only; and
 - ii. the noise levels reported using the following noise descriptors: LAeq,T; LAF90,T; and LAFmax,T (T representing the 15 minute measurement period unless an alternative period is justified); and

Environment Protection Licence

Licence - 21672

iii. an assessment of measured construction noise and vibration levels against noise limits or noise management levels specified in this licence, requirements in the project specific Construction Noise and Vibration Plan and/or Impact Statement prepared the activities, relevant noise modelling and any relevant noise guidelines.

- R4.3** In the event of any exceedance of the Best Achievable Noise Performance Objectives identified in the project specific Construction Noise and Vibration Plan and/or Impact Statement ("the plans") prepared for the activities, the licensee must:
- a) investigate the cause of the exceedance and identify whether all feasible and reasonable noise and vibration mitigation measures identified in the plans have been effectively deployed;
 - b) identify any noise and vibration measures recommended in the plans that were not effectively deployed;
 - c) assess appropriate remedial actions to seek to achieve the best achievable noise performance objectives;
 - d) submit a Follow-Up Investigation Report to the EPA within 5 business days (unless agreed in writing by the EPA) of any noise or vibration monitoring having been undertaken that detected the exceedance; and
 - e) include the following information in the Follow-Up Investigation Report:
 - i. confirmation of whether noise monitoring has been undertaken in accordance with AS1055:2018 and the compliance monitoring guidance provided in the Interim Construction Noise Guideline (DECC, 2009);
 - ii. confirmation of whether vibration monitoring has been undertaken in accordance with the guidance provided in Assessing Vibration: A Technical Guideline (DEC, 2006);
 - iii. details of the prevailing meteorological conditions during the period when the monitoring was undertaken;
 - iv. a map of each noise and vibration monitoring location in relation to the noise source, including relevant distances;
 - v. numerical and graphical representation of the noise and vibration monitoring results;
 - vi. an analysis of the noise and vibration monitoring results;
 - vii. details of any remedial action taken in relation to the matter; and
 - viii. in cases not the subject of remedial action, detailed justification of the decision not to undertake remedial action.
- R4.4** The licensee must record all inspections of erosion and sediment control measures installed on the premises, including observations and works undertaken to repair and maintain these measures, and provide these records to an authorised officer upon request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

Note: The requirements outlined in this condition only come into force when works and activities commence at the licensed premises.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Licence

Licence - 21672

G2 Contact number for incidents and responsible employees

- G2.1 The licensee must provide the EPA with, and maintain, up to date contact details to enable the EPA:
- a) To contact either the licensee or a representative of the licensee who can respond at all times to incidents relating to the premises, and
 - b) To contact the licensee's senior employees or agents authorised at all times to;
 - i. speak on behalf of the licensee, and
 - ii. provide any information or document required under licence.
- G2.2 The contact details required by Condition G2.1 above must include:
- a) the full name and title of the authorised representatives and the scope of their respective authorisations; and
 - b) the direct telephone number, mobile number, email address and postal address for contacting each authorised representative.

G3 Other general conditions

- G3.1 Environmental Induction
- a) The licensee must ensure all personnel and contractors involved in undertaking any activity subject to this licence that has the potential to impact Noise Sensitive Receivers have received environmental induction training relevant to their role prior to undertaking that activity; and
 - b) The induction training must:
 - i. clearly identify the location of all noise sensitive receivers likely to be affected by noise or vibration generated during the course of the work undertaken by those personnel; and
 - ii. highlight the licence requirements to minimise noise and vibration impacts on Noise Sensitive Receivers.

8 Special Conditions

E1 Community Agreements

- E1.1 Work outside standard construction hours - community consultation and agreement
- The licensee may work outside standard construction hours (as defined in L5.1) in circumstances other than those permitted under conditions L5.3, L5.4, or any other condition of this licence if the Licensee:
- a) undertakes community consultation and agreement as described in E1.2;
 - b) submits to the EPA a written request to work outside the standard construction hours attaching information set out in E1.3; and
 - c) obtains approval by the EPA to work outside standard construction hours. The EPA may, in exercising its discretion to approve the works outside standard construction hours, review whether the licensee has obtained community agreement. Specifically, whether a substantial majority of the individual Noise Sensitive Receivers who together comprise the Community Affected Catchments and were contacted has consented to the planned works out of standard hours.
- E1.2 Requirements for community consultation and agreement
- Any community consultation and agreement undertaken with respect to the proposed out of hours works (OOHW) must:
- a) be prepared and implemented in accordance with the Interim Construction Noise Guidelines (DEC 2009),

Environment Protection Licence

Licence - 21672

the Noise Policy for Industry (EPA, 2017) and AS2436-2010: Guide to noise and vibration control on construction, demolition and maintenance sites;

b) include consultation of all noise sensitive receivers within the Community Affected Catchments. This includes Noise Sensitive Receivers that have declined to participate in previous agreements unless a community member has explicitly requested not to be involved in any future consultation about future OOHWS;

c) ensure that the noise sensitive receivers understand the nature of the works and any predicted impacts, including that consideration is made of additional requirements relevant to the needs of culturally and linguistically diverse Noise Sensitive Receivers, and include details for interpreting services for languages other than English where required.

d) include in the community consultations with Noise Sensitive Receivers the following information:

- i. the actual works proposed;
- ii. any expected impacts in clear, plain English based on noise modelling;
- iii. the expected duration of the works;
- iv. any expected benefits for receivers;
- v. any other known concurrent OOHWS that will be occurring; and
- vi. any other OOHWS that will be occurring on the nights preceding and following the proposed works or, if the proposed work precedes or follows a weekend period, any other OOHWS that will be occurring on the weekend.

e) request consent from the Noise Sensitive Receiver for their responses to be provided to the EPA;

f) ensure that a record is kept when a licensee is unable to contact a noise sensitive receiver after three attempts, including leaving "sorry I missed you" cards explaining the reason for the visit and requesting a return phone call; and

g) demonstrate, where the OOHWS is predicted to go on longer than 28 calendar days, that the licensee has consulted the community in relation to re-engagement periods for the purpose of determining agreement from the community is maintained and continuing.

Detailed records are to be maintained by the licensee of all community consultations, including attempts to contact Noise Sensitive Receivers, and must be maintained for the duration of the licence.

Any Noise Sensitive Receiver who requests a copy of the record of conversations must be supplied with one.

E1.3 The licensee must report to the EPA the community consultation and agreement process that was undertaken with the Community Affected Catchments.

This report to the EPA must be:

- a) prepared in writing;
- b) detail the steps taken to fulfil the requirements of condition E1.2;
- c) demonstrate that the Noise Sensitive Receivers understood the nature of the works and any predicted impacts, including that consideration was made of additional requirements relevant to the needs of culturally and linguistically diverse Noise Sensitive Receivers;
- d) provide the script used during the community consultation with Noise Sensitive Receivers;
- e) report community response and consent rates (including where no contact could be made) against the total community affected catchments, and must be broken down into response and consent rates based on sub-catchments that are delineated by affectation levels;
- f) include a noise validation monitoring plan as required by E1.4; and
- g) be submitted to the EPA at least 15 business days prior to any works that are the subject of the agreement being undertaken unless prior arrangements have been made with the EPA.

A copy of the report must be:

- a) kept by the licensee for the duration of this licence including on the premises, and made available to an EPA authorised officer on request; and
- b) be made available on the licensee's project website or another website approved in writing by the EPA for the duration of the OOHWS permitted under condition E1.1. (Personal details of Noise Sensitive Receivers must be omitted).

Environment Protection Licence

Licence - 21672

E1.4 Noise Validation Monitoring

A noise validation monitoring plan must be submitted to the EPA for approval as part of the community agreement documentation prior to any OOHW occurring.

E1.5 Validation monitoring must be undertaken for any OOHW that are the approved under condition E1.1 and must:

- a) be undertaken in accordance with the monitoring plan prepared under condition E1.4;
- b) be performed by a Competent Person;
- c) be performed on at least the first 2 occasions (day, evening, nights) where OOHW will be undertaken and are likely to impact Noise Sensitive Receivers;
- d) be performed on any other occasion (day, evening, night) where the nature of the works is likely to cause greater noise impacts than the first 2 occasions;
- e) be representative of the impacts in terms of monitoring locations, time and duration of measurements; and
- f) be recorded and provided to an EPA officer upon request

E1.6 If validation monitoring undertaken under Condition E1.5 shows that noise levels are higher than those predicted by any noise modelling undertaken as part of the community agreement, work practices must be modified immediately so that measured noise levels do not exceed predicted levels.

Where it has been determined that works cannot be modified to achieve the predicted noise levels:

- a) the licensee must report immediately to the EPA; and
- b) after considering the circumstances EPA may withdraw its permission under E1.1.

E1.7 Ongoing community engagement and agreement

- a) For any approval of OOHW under E1.1 predicted to take longer than 28 calendar days to remain valid, the licensee must be able to demonstrate agreement from the community is maintained and continuing.
- b) To demonstrate agreement from the community is maintained and continuing the licensee must:
 - i. engage the community to determine if a substantial majority of Noise Sensitive Receivers continue to consent to the OOHW pursuant to the re-engagement period determined under condition E1.3(g);
 - ii. provide the EPA with a report within 7 calendar days of the end of each re-engagement period summarising the community response including ongoing consent rates of the Noise Sensitive Receiver; and
- c) Where the licensee is unable to demonstrate a substantial majority of agreement from Community Affected Catchment is maintained and continuing:
 - i. the licensee must report immediately to the EPA; and
 - ii. after considering the circumstances EPA may withdraw its permission under E1.1.

E2 Surface Water Monitoring

E2.1 The licensee must undertake weekly surface water monitoring of receiving waterways at locations upstream, downstream and adjacent to each discharge point: 6, 7, 8, 9 and 10 identified in Condition P1.1. This monitoring must be undertaken for a minimum of 6 months from the date that points 6, 7, 8, 9 and 10 were added to the licence.

Fortnightly monitoring results must include:

- a) quality and quantity of all parameters that are identified in the table in M2.2 for each discharge point: 6, 7, 8, 9 and 10; and
- b) results must be submitted to the EPA no more than 2 weeks after each monitoring event has occurred for a minimum of 6 months from the date that points 6, 7, 8, 9 and 10 were added to the licence.

Environment Protection Licence

Licence - 21672

E3 Special Dictionary

E3.1 Special Dictionary

Term	Meaning
Best Achievable Noise Performance Objectives	The construction noise level predicted at a receiver location after all feasible and reasonable noise mitigation measures have been incorporated into the prediction model and considered in deriving the predicted noise level
Detailed/Construction Noise and Vibration Impact Assessment is a document or suite of documents that:	Describe the construction activities proposed; identifies the potential impacts of those activities on the community; the measures that will be used to reduce impacts on the affected community; how the community will be informed and engaged; and, how noise impacts will be monitored and enforced. They are often referred to as Noise and Vibration Management Plans, Construction Noise and Vibration Impact Statements, Construction Method Statements, Work Method Statements and the like.
Construction Work	includes all construction work and activities, and all construction-related work and activities, undertaken on the premises
High Noise Impact Activities and Works	means jack hammering, rock breaking or hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel or other work occurring on the surface that generates noise with impulsive, intermittent, tonal or low frequency characteristics
Interim Construction Noise Guidelines (ICNG)	Interim Construction Noise Guidelines (DECC, July 2009)
In Writing	documents are to be submitted electronically unless otherwise requested by EPA
Noise Management Level (NML)	has the same meaning as "Airborne Noise Management Levels" in the Interim Construction Noise Guideline (DECC 2009)
Noise sensitive receiver	Land uses that are sensitive to noise, including residences and other sensitive land uses detailed in Table 3 of the Interim Construction Noise Guideline (DECC 2009)
Operating Hours	means hours during which any construction-related works or activities are being undertaken, including outside of standard construction hours
Out of Hours	means hours outside those prescribed by condition L5.1
Rating Background Level (RBL)	the same meaning as in the Interim Construction Noise Guideline (DECC 2009)

Environment Protection Licence

Licence - 21672

Residence	A lawful and permanent structure erected in a land-use zone that permits residential use (or for which existing use rights under the EP&A Act apply) where a person/s permanently reside and is not, nor associated with, a commercial undertaking such as caretakers quarters, hotel, motel, transient holiday accommodation or caravan park
Resource Recovery Order and/or Exemption	As described under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014
Suitably Qualified and Experienced Person - For the purpose of noise monitoring, must satisfy one or more of the following	<ul style="list-style-type: none"> • Have qualifications and/or experience sufficient to fulfil the requirements of 'member' grade of the Australian Acoustical Society • Undertake duties of an acoustic consultant on behalf of a firm that is a member of the Association of Australasian Acoustical Consultants • Have a recognised tertiary qualification in a discipline pertinent to acoustics • Demonstrate competence through professional experience and/or technical expertise to the satisfaction of the EPA if requested.

E4 WTP Proof of Performance

E4.1 Water Treatment Plant (WTP) Performance Reporting

A) The licensee must undertake water quality sampling of all discharges from the WTPs (as identified as Point 6, 7, 8, 9 and 10 under condition P1.1) and submit to the EPA a WTP Performance Report within 10 business days of each sample result being taken. Sampling must be undertaken:

- i) daily on the first 3 days of discharges
- ii) weekly for the first month of discharges
- iii) fortnightly for the first 3 months
- iv) As per condition M2.2, following this sampling frequency or as directed by the EPA

B) The WTP Performance Report

- i) include results of all discharge quality monitoring with a comparison to all pollutants listed in conditions L2.4 and M2/2 for Points 6, 7, 8, 9 and 10.
- ii) include results of all WTP influent quality, and
- iii) be emailed to the EPA to info@epa.nsw.gov.au.

Note: The purpose of this condition is to allow proof of performance testing to assist the EPA in setting accurate discharge limits for the WTP. The EPA will review the limits against the performance of the WTP and revise them as appropriate in consultation with the licensee.

Environment Protection Licence

Licence - 21672

Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 21672

flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

Environment Protection Licence

Licence - 21672

TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
Wellhead	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021

Ms Jacqueline Ingham

Environment Protection Authority

(By Delegation)

Date of this edition: 30-May-2022

End Notes

2	Licence varied by notice	1622058 issued on 26-Aug-2022
3	Licence varied by notice	1624698 issued on 30-Nov-2022
4	Licence varied by notice	1626397 issued on 09-Feb-2023
5	Licence varied by notice	1627340 issued on 10-Mar-2023

Annexure F Baseline groundwater quality summary



1 Baseline Groundwater Quality Summary

General water quality baseline conditions have been assessed using data from new and existing wells available to 28 July 2023 compiled into an electronic ESdat database. The database includes groundwater quality data obtained directly from the supplied tender documents and digital databases, and the Environment Impact Statement (EIS), and the baseline assessment conducted by CPBG. All available baseline groundwater analytical data is presented in Appendix D.

Where historical laboratory data collected obtained from third party sources was not available electronically, data has been extracted from PDF format tables using PDF editing software so that it could be compiled and imported into the ESdat database. Similarly, field-measured water quality parameters (pH, electrical conductivity, redox potential, dissolved oxygen, TDS, major ions, and resistivity) not provided electronically was either extracted using PDF editing software, or manually digitised.

While all reasonable efforts were made to ensure manual data transcription errors, and any identified errors introduced during manipulation and importing to a database were corrected, the potential exists for the pre-award laboratory data and water quality parameters to include errors and / or results to be omitted or assigned to incorrect analytes.

The following summary provides a review of the baseline water quality along the alignment based on available data to 28 July 2023. Most groundwater wells are screened in the bedrock or residual soils, with a number of wells along the main drainage channels and creek lines (including South Creek and its tributaries) intersecting shallow alluvial deposits. Construction details of groundwater monitoring bores that were nominated for monitoring as part of the baseline assessment (pre-award and SBT works monitoring locations) are summarised in Table F1 and F2, along with the current status of these monitoring bores.



Table F1: Construction details and groundwater monitoring bores able to be sampled for baseline assessment

Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-CM-1022	SBT-GW-1022	St Marys	14-Jul-22	Existing	Bedrock	293832.3	6261980.6	34.287	9 - 12	22.3 - 25.3	
SBT-CM-1030	SBT-GW-1030	XPN13 / Tunnel	17-Aug-22	Existing	Residual/Bedrock	291923.5	6260911.5	36.807	2 - 6	30.8 - 34.8	
SBT-GW-0001	-	St Marys	NK	Existing	Unknown	293910.9	6261970.2	35.21	NK	NK	
SBT-GW-0001B	-	St Marys	4-May-23	Existing	Bedrock	293910.9	6261970.2	35.211	8.5 - 14.5	20.7 - 26.7	
SBT-GW-1001	SBT-GW-1001_S	St Marys	6-May-22	Existing	Residual/ Bedrock	294435.2	6261848.3	48.827	2 - 8	40.8 - 46.8	
SBT-GW-1002	-	St Marys	15-Aug-22	Existing	Residual/ Bedrock	294464.6	6261979.9	42.605	2 - 8	34.6 - 40.6	
SBT-GW-1005	SBT-GW1005_S	St Marys	28-Jul-22	Existing	Residual/ Bedrock	294262.4	6261825.2	44.195	2 - 8	36.2 - 42.2	
SBT-GW-1012	-	St Marys	12-Dec-22	Existing	Residual/ Bedrock	293930.5	6261971.2	35.361	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1013	-	St Marys	8-Dec-22	Existing	Residual/ Bedrock	293931.4	6261964.9	35.398	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1014	-	St Marys	8-Dec-22	Existing	Residual/ Bedrock	293931.8	6261959.4	35.471	2.5 - 7.5	27.9 - 32.9	
SBT-GW-1016	-	St Marys	7-Oct-22	Existing	Residual/ Bedrock	293905.8	6261847.7	36.122	5 - 10	26.1 - 31.1	
SBT-GW-1017	-	St Marys	27-Sep-22	Existing	Residual/ Bedrock	293646.1	6262114.9	32.475	2 - 8	22.5 - 30.5	
SBT-GW-1019R	SBT-GW-1019_r	St Marys	1-Sep-22	Existing	Bedrock	293888.3	6261978.7	35.196	13.9 - 18	17.2 - 21.3	
SBT-GW-1020	SBT-CM-1020	St Marys	9-Jun-22	Existing	Alluvium	293862.0	6261980.1	34.943	2 - 7	27.9 - 34.9	





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-1021	-	St Marys	21-Aug-22	Existing	Residual/ Bedrock	293847.8	6262056.4	33.906	2 - 8	25.6 - 31.6	
SBT-GW-1024	-	Claremont Meadows SF	20-May-22	Existing	Alluvium/ Bedrock	292108.9	6261303.0	28.506	3 - 12	NK	
SBT-GW-1031	-	XPN14/ Tunnel	4-Aug-22	Existing	Bedrock	291872.1	6260654.0	40.808	15 - 20	20.8 - 25.8	
SBT-GW-1037	SBT-GW-1037_S	Orchard Hills Station	4-Aug-22	Existing	Residual/ Bedrock	291757.7	6259320.6	40.544	2 - 8	32.5 - 38.5	
SBT-GW-1042	-	Orchard Hills Station	17-Jun-22	Existing	Alluvium	291874.7	6259123.7	40.069	2 - 8	32.1 - 38.1	
SBT-GW-1043	SBT-GW-1043_S	Orchard Hills Station	8-Aug-22	Existing	Alluvium/ Bedrock	291876.5	6259087.8	39.631	2 - 8	31.6 - 37.6	
SBT-GW-1048	-	Orchard Hills Station	12-Aug-22	Existing	Alluvium/ Bedrock	291955.6	6259007.4	39.642	2 - 8	31.6 - 37.6	
SBT-GW-1063	-	Orchard Hills Station	30-Sep-22	Existing	Alluvium/ Bedrock	292193.5	6258861.3	31.558	2 - 11	20.6 - 29.6	
SBT-GW-1347a	-	St Marys	10-May-23	Existing	Alluvial	293953.9	6261962.4	35.734	6 - 9	26.7 - 29.7	
SBT-GW-1347b	-	St Marys	10-May-23	Existing	Residual/ Bedrock	293954.9	6261962.8	35.712	12 - 15	20.7 - 23.7	
SBT-GW-1347c	-	St Marys	9-May-23	Existing	Bedrock	293954.6	6261962.2	35.74	17 - 20	15.7 - 18.7	
SBT-GW-1348a	-	St Marys	15-May-23	Existing	Alluvial	293952.9	6261956.1	35.796	5.5 - 8.5	27.3 - 30.3	
SBT-GW-1348b	-	St Marys	12-May-23	Existing	Residual/ Bedrock	293954.0	6261955.9	35.831	11 - 14	21.8 - 24.8	
SBT-GW-1348c	-	St Marys	11-May-23	Existing	Bedrock	293953.4	6261957.0	35.848	17 - 20	15.8 - 18.8	





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-1803		St Marys	27-Mar-23	Existing	Bedrock	294375.8	6261850.4	47.649	16.5 - 25.5	22.2 - 31.2	Installed to replace SMGW-BH-A103
SBT-GW-1804		South Creek	26-Aug-23	Existing	Residual	292194.9	6261580.1	21.021	3 - 5	16.0 - 19.0	Installed to replace SMGW-BH-A107S
SBT-GW-1805		Claremont Meadows SF	4-Apr-23	Existing	Residual	292046.7	6261326.1	27.296	3 - 9	18.3 - 24.3	Installed to replace SMGW-BH-A109S
SBT-GW-1806		Orchard Hills	3-Apr-23	Existing	Bedrock	291755.3	6258999.8	42.957	15 - 24	19 - 28	Installed to replace SMGW-BH-A017
SBT-GW-1807		Orchard Hills	3-Mar-23	Existing	Bedrock	291901.4	6258843.1	37.479	10 - 16	21.5 - 27.5	Installed to replace SMGW-BH-A117
SBT-GW-1808		Orchard Hills	3-Mar-23	Existing	Residual	291902.3	6258845.2	37.455	2 - 5	32.5 - 35.5	Installed to replace SMGW-BH-A117S
SBT-GW-3003-A	SBT-GW-3003	Portal / XPS01	11-Aug-22	Existing	Bedrock	290425.6	6248380.7	67.706	2 - 5	62.7 - 65.7	



Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-3003-B	SBT-GW-3004	Portal / XPS01	11-Aug-22	Existing	Bedrock	290424.6	6248382.2	67.378	10 - 13	54.4 - 57.4	
SBT-GW-3003-C	SBT-GW-3005	Portal / XPS01	10-Aug-22	Existing	Bedrock	290423.4	6248384.0	67.328	19 - 22	45.3 - 48.3	
SBT-GW-3006	SBT-BH-3006, SBT-GW-3006_w	Airport Terminal	29-Jun-22	Existing	Bedrock	289368.0	6247844.4	84.305	29 - 35	49.3 - 55.3	
SBT-GW-3012-A	-	Airport Terminal	28-Aug-22	Existing	Bedrock	289133.2	6247685.6	83.958	2 - 8	76 - 82	
SBT-GW-3012-B	-	Airport Terminal	28-Aug-22	Existing	Bedrock	289134.8	6247682.9	83.9	10 - 16	67.9 - 73.9	
SBT-GW-3012-C	-	Airport Terminal	28-Aug-22	Existing	Bedrock	289136.4	6247680.3	83.777	20 - 26	57.8 - 63.8	
SBT-GW-3022	-	Airport Terminal	1-Aug-22	Existing	Bedrock	289446.1	6247614.1	77.776	3 - 15	62.8 - 74.8	
SBT-GW-4000	-	Western Sydney Airport	1-Dec-22	Existing	Bedrock	289140.5	6246360.3	72.235	2.5 - 13	59.2 - 69.7	Replaced SMGW-BH-C209 for XP monitoring
SBT-GW-4003	-	Bringelly SF	23-Jun-22	Existing	Residual/ Bedrock	289518.7	6245851.2	71.932	2 - 7	64.9 - 69.9	
SBT-GW-4005	SBT-BH-4005	Bringelly SF	26-May-22	Existing	Bedrock	289666.8	6245749.6	73.613	10 - 20	53.6 - 53.6	
SBT-GW-4008	SBT-BH-4008	Cross passage / Tunnel	2-Nov-22	Existing	Bedrock	290230.0	6244991.9	78.269	NK	NK	



Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-4010	-	Aerotropolis - Bringelly	3-Jun-22	Existing	Bedrock	290427.4	6244758.3	78.779	22 - 28	50.78 - 56.78	Replacement for SMGW-BH-D205
SBT-GW-4014	SBT-GW-4014_S	Aerotropolis Station	1-Aug-22	Existing	Residual/ Bedrock	290632.2	6243966.3	73.902	5 - 14	NK	
SBT-GW-4017	-	Aerotropolis Station	26-May-22	Existing	Residual	290805.8	6243870.8	71.334	2 - 12	59.3 - 61.3	
SBT-GW-4019	SBT-BH-4019	Aerotropolis Station	28-Jul-22	Existing	Bedrock	290669.6	6243885.0	75.875	20 - 30	45.9 - 55.9	
SBT-GW-4021	-	Aerotropolis Station	26-Aug-22	Existing	Alluvium/ Bedrock	291112.5	6243748.0	62.847	2 - 11	51.9 - 60.9	
SBT-GW-4800	-	Bringelly SF	29-Mar-23	Existing	Residual/ Bedrock	289626.6	6245830.0	71.432	2 - 7	64.4 - 69.4	Installed to replace SBT-GW-4002
SBT-GW-4801	-	Bringelly SF	30-Mar-23	Existing	Residual/ Bedrock	289580.1	6245835.6	71.372	4 - 16	55.4 - 67.4	Installed to replace SBT-GW-4020
SBT-GW-4802	-	Bringelly SF	30-Mar-23	Existing	Bedrock	289583.3	6245761.2	74.348	4 - 16	58.4 - 70.4	Installed to replace SBT-GW-4022



Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-4803	-	Aerotropolis	28-Mar-23	Existing	Bedrock	290647.1	6244147.5	72.657	5 - 11	61.7 - 67.7	Installed to replace SMGW-BH-D310
SMGW-BH-A107	-	TBM Tunnel - South Creek	5-Dec-19	Existing	Bedrock	292413.0	6261713.0	22.5	19 - 26	-3.5 - 3.5	
SMGW-BH-A122	-	Claremont Meadows SF	11-Dec-19	Existing	Bedrock	291893.0	6260308.0	41.4	25 - 35	6.4 - 16.4	
SMGW-BH-A315	-	Orchard Hills	11-Feb-21	Existing	Residual/ Bedrock	291726.6	6258863.8	42.28	4 - 10	32.3 - 38.3	
SMGW-BH-A361	-	St Marys	28-Jun-21	Existing	Bedrock	293852.4	6261984.6	34.871	11 - 17	17.9 - 23.9	
SMGW-BH-A401	-	St Marys	6-Oct-21	Existing	Residual/ Bedrock	294106.3	6261997.8	36.51	3 - 9	27.5 - 33.5	Replacement for SBT-GW-1008
SMGW-BH-B120	-	Luddenham Road	17-Jan-20	Existing	Bedrock	290964.0	6253779.0	52.6	5 - 14	38.6 - 47.6	
SMGW-BH-B123	-	Luddenham Road	22-Jan-20	Existing	Bedrock	290939.0	6253035.0	57.2	5 - 14	43.2 - 52.2	
SMGW-BH-B317	-	Orchard Hills	30-Mar-21	Existing	Residual/ Bedrock	291440.3	6254935.2	44.23	1.5 - 4.5	39.7 - 42.7	Department of Defence access required
SMGW-BH-B319	-	Orchard Hills	NK	Existing	Residual/ Bedrock	291172.9	6254263.9	50.02	1.8 - 4.8	45.2 - 48.2	





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Date Installed	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SMGW-BH-C320	-	Western Sydney Airport	8-Mar-21	Existing	Residual/ Bedrock	289629.3	6246534.9	66.47	3 - 9	57.5 - 63.5	
SMGW-BH-C321	-	Western Sydney Airport	10-Mar-21	Existing	Residual/ Bedrock	289808.6	6246630.0	63.45	1.5 - 6	57.4 - 61.9	
SMGW-BH-C324	-	Western Sydney Airport	12-Mar-21	Existing	Residual/ Bedrock	289732.8	6246812.8	67.78	4 - 10	57.8 - 63.8	
SMGW-BH-C330	-	Western Sydney Airport	8-Mar-21	Existing	Bedrock	289535.1	6246506.5	69.35	3 - 9	60.3 - 66.3	
SMGW-BH-C332	-	Western Sydney Airport	8-Mar-21	Existing	Bedrock	289459.4	6247135.2	81.83	4 - 9	72.8 - 77.8	
SMGW-BH-D109S	-	Aerotropolis	2-Apr-20	Existing	Bedrock	290715.8	6243821.2	72.4	5.95 - 8.95	63.4 - 66.4	
SMGW-GW01	GW01, GW-01	St Marys	1-May-19	Existing	Residual	293863.6	6261984.7	35.12	4.5 - 7.5	27.6 - 30.6	
SMGW-GW02	GW02, GW-02	St Marys	1-May-19	Existing	Residual	293887.3	6261984.0	35.39	5 - 8	27.4 - 30.4	
WSA GW0S	WSA GW05	WSI	NK	Existing	Unknown	288574.0	6246161.0	74	5 - 10	64 - 67	
BH207	-	M12	NK	Existing	Unknown	292342.0	6251217.0	40	5.9 - 17.9	22.1 - 34.1	
BH209	-	M12	NK	Existing	Unknown	292587.0	6251246.0	39.4	0.5 - 18.2	21.2 - 38.9	
MW02	-	Aerotropolis	NK	Existing	Unknown	291241.0	6243734.0	61.5	3 - 6	55.5 - 58.5	
MW1	BH1, MW-1	St Marys	NK	Existing	Residual	293889.0	6261976.0	NK	4.3 - 7.3	NK	
MWO1	-	Aerotropolis	NK	Existing	Unknown	290928.0	6244381.0	68.1	3 - 6	62.1 - 65.1	



Table F2: Groundwater monitoring bores nominated for baseline monitoring found to be inactive or destroyed

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SBT-GW-1008	-	St Marys	Removed	-	-	-	-	-	-	Not installed. Replaced with SMGW-BH-A401
SBT-GW-1015	-	St Marys	Removed	-	-	-	-	-	-	Not installed. Replaced with SBT-GW-0001
SBT-GW-1028	SBT-GW-1028_S	Claremont Meadows SF	Unable to locate	Residual	292050.7	6261167.6	30.487	3 - 6	24.5 - 27.5	In asbestos exclusion zone
SBT-GW-4002	-	Bringelly SF	Destroyed	Bedrock	NK	NK	NK	2 - 7	NK	Destroyed by earthworks
SBT-GW-4020	-	Bringelly SF	Destroyed	Bedrock	NK	NK	NK	4 - 16	NK	Destroyed by earthworks
SBT-GW-4022	-	Bringelly SF	Destroyed	Bedrock	289586.4	6245761.5	74.332	4 - 16	58.3 - 70.3	Destroyed by earthworks
SMGW-BH-A017	-	Orchard Hills Station	Destroyed	Bedrock	291728	6258996	43.6	15 - 24	19.6 - 28.6	Destroyed by trenching works. Replaced by SBT-GW-1806
SMGW-BH-A103	-	TBM Tunnel - St Marys	Destroyed	Bedrock	294351	6261870	46.4	15 - 24	22.4 - 31.4	Destroyed by construction. Replaced by SBT-GW-1803
SMGW-BH-A107S	-	TBM Tunnel - South Creek	Unable to locate	Residual	292413	6261713	22.5	3 - 5	17.5 - 19.5	Unable to locate Replaced by SBT-GW-1804
SMGW-BH-A109S	-	Claremont Meadows SF	Destroyed	Residual	292037	6261297	27.4	3.5 - 5	22.4 - 23.9	Destroyed by construction. Replaced by SBT-GW-1805
SMGW-BH-A113	-	TBM Tunnel M4	Removed	Bedrock	291786	6259594	43.4	20 - 29	14.4 - 23.4	Removed from program - requires TC Nightworks





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SMGW-BH-A117	-	Orchards Hill Station	Destroyed	Bedrock	291855	6258838	38.9	10 - 16	22.9 - 28.9	Destroyed by construction. Replaced by SBT-GW-1807
SMGW-BH-A117S	-	Orchard Hills	Destroyed	Residual	291857.1	6258839.4	38.78	2.2 - 4.2	34.58 - 36.58	Destroyed by construction. Replaced by SBT-GW-1808
SMGW-BH-A121	-	Claremont Meadows SF	Destroyed	Bedrock	291944	6260883	38.6	15 - 21	17.6 - 23.6	Destroyed by earthworks
SMGW-BH-A202	-	St Marys	Destroyed	Bedrock	293936.6	6261969.7	35.53	7.5 - 9.5	26.03 - 28.03	Well gatic removed and converted to storm water drain. Replaced by SBT-GW-1012 - SBT-GW-1014
SMGW-BH-A302	-	St Marys	Destroyed	Residual/Bedrock	293999.2	6261951.4	35.81	5.6 - 11.6	24.21 - 30.21	Destroyed as part of cutting and filling works. Replaced by SBT-GW-1347 and 1348 nested wells
SMGW-BH-B106	-	Luddenham Road	Destroyed	Alluvium	291703	6256950	39.4	1 - 4	35.4 - 38.4	Well destroyed
SMGW-BH-B109	-	Luddenham Road	Destroyed	Bedrock	291572	6256049	41.5	9 - 13	28.5 - 32.5	Destroyed by construction
SMGW-BH-B121	-	Luddenham Road	Destroyed	Residual	290940	6253451	56.6	2 - 3	53.6 - 54.6	Well destroyed
SMGW-BH-B130	-	Elizabeth Drive	Destroyed	Bedrock	291379	6250043	60.3	5 - 14	46.3 - 55.3	Destroyed by M12 construction
SMGW-BH-B308	-	Luddenham Rd - Orchard Hills	Removed	Residual	292032.7	6257200.4	34.82	1.2 - 4.2	30.62 - 33.62	Landowner permission denied





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SMGW-BH-B309	-	Luddenham Rd - Orchard Hills	Removed	Residual	291835.5	6257202.7	35.63	0.9 - 5.4	30.23 - 34.73	Landowner permission denied
SMGW-BH-C001S	SMGW-BH-0001S	Badgerys Creek	Unknown condition	Unknown	288970	6246102	67	2 - 4	63 - 65	Well locked, owner permission denied
SMGW-BH-C002	SMGW-BH-0002	Badgerys Creek	Unknown condition	Unknown	288852	6246085	66.8	6 - 15	51.8 - 60.8	Well locked, owner permission denied
SMGW-BH-C201	-	Western Sydney Airport	Destroyed	Bedrock	290279.2	6248347.9	68.71	13.6 - 28.6	40.11 - 55.11	Destroyed by earthworks
SMGW-BH-C205SA	-	Western Sydney Airport	Destroyed	Residual/Bedrock	289204.9	6247729.9	77.7	2.5 - 5.5	72.2 - 75.2	Destroyed by earthworks
SMGW-BH-C206	-	Western Sydney Airport	Unknown condition	Bedrock	288838.3	6247416.3	81.61	21 - 27	54.61 - 60.61	Destroyed by earthworks
SMGW-BH-C207	-	Western Sydney Airport	Unknown condition	Bedrock	288773.1	6247042.2	88.76	29 - 38	50.76 - 59.76	Destroyed by earthworks
SMGW-BH-C208	-	Western Sydney Airport	Destroyed	Bedrock	288877.5	6246773.6	79.46	31.3 - 40.3	39.16 - 48.16	Destroyed by earthworks
SMGW-BH-C209	-	Western Sydney Airport	Removed	Bedrock	289127.8	6246455.3	75.44	20.2 - 29.2	46.24 - 55.24	Replaced by SBT-GW-4000 due to change in XP configuration.
SMGW-BH-C303	-	Western Sydney Airport	Unknown condition	Residual/Bedrock	291075.3	6248861.4	60.15	1.5 - 5.5	54.65 - 58.65	Destroyed by earthworks





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
SMGW-BH-D109	-	Aerotropolis	Destroyed	Bedrock	290714.9	6243825.3	72.6	11 - 20	52.6 - 61.6	Well lost - suspect destroyed
SMGW-BH-D205	-	Aerotropolis - Bringelly	Destroyed	Bedrock	290390.4	6244793.9	79.3	22 - 28	51.3 - 57.3	Well destroyed. Replaced with SBT-GW-4010
SMGW-BH-D206	-	Aerotropolis - Bringelly	Destroyed	Bedrock	290513.1	6244560.3	79.15	22 - 28	51.15 - 57.15	Destroyed by earthworks
SMGW-BH-D207	-	Aerotropolis - Bringelly	Destroyed	Bedrock	290718.0	6244026.4	70.13	8 - 11	59.13 - 62.13	Destroyed by earthworks
SMGW-BH-D208	-	Aerotropolis - Bringelly	Destroyed	Residual/Bedrock	290742.5	6243690.5	67.87	1 - 4.1	63.77 - 66.87	Destroyed by earthworks
SMGW-BH-D310	-	Aerotropolis	Destroyed	Bedrock	290672.5	6244145.4	71.55	3 - 9	62.55 - 68.55	Destroyed by construction. Replaced by SBT-GW-4803
1990_Coff_D10	-	WSI	Unknown condition	Bedrock	289886	6248066	88	0 - 10	78 - 88	Well destroyed in bulk earth works
1990_Coff_D12	-	WSI	Destroyed	Bedrock	291270	6249548	59	0 - 10.5	48.5 - 59	Destroyed by construction of Seymour White slip road.
1990_Coff_D13	-	WSI	Destroyed	Alluvium/Bedrock	290822	6248092	73.5	0 - 10.35	63.15 - 73.5	Well destroyed in bulk earth works
1990_Coff_D5	-	WSI	Unknown condition	Bedrock	288261	6247663	102.5	0 - 20.5	82 - 102.5	Well destroyed in bulk earth works
1990_Coff_D6	-	WSI	Unknown condition	Bedrock	287900	6246723	112.9	0 - 25.1	87.8 - 112.9	Well destroyed in bulk earth works





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
1990_Coff_D7	-	WSI	Unknown condition	Bedrock	288258	6246085	79.4	0 - 10.35	69.05 - 79.4	Well destroyed in bulk earth works
1990_Coff_D9	-	WSI	Unknown condition	Bedrock	289591	6247340	87.5	0 - 10.25	77.25 - 87.5	Well destroyed in bulk earth works
2018_JK_BH-D-161	-	WSI	Destroyed	Unknown	292042	6249246	48.2	45204	38.2 - 43.2	Destroyed in construction of leachate pond.
BB01	-	Aerotropolis	Destroyed	Bedrock	290737	6243959	71.8	6 - 12	59.8 - 65.8	Destroyed by earthworks
BB02	-	Aerotropolis	Destroyed	Bedrock	290753	6243957	71.7	6 - 12	59.7 - 65.7	Destroyed by earthworks
BB03	-	Aerotropolis	Destroyed	Bedrock	290750	6243952	71.9	6 - 12	59.9 - 65.9	Destroyed by earthworks
BB114	-	Aerotropolis	Destroyed	Bedrock	290808	6244063	67.7	6 - 12	55.7 - 61.7	Destroyed in bulk earthworks
BB116	-	Aerotropolis	Unable to locate	Residual	291171	6244247	63.3	3 - 6	57.3 - 60.3	Unable to locate, suspect destroyed
BH05	-	Orchard Hills	Unable to Locate	Unknown	291691	6259715	56.6	6 - 9	47.6 - 50.6	Unable to Locate
BH09	-	Orchard Hills	Unable to Locate	Bedrock	291732	6259731	54.6	3 - 12	42.6 - 51.6	Unable to Locate
BH1	-	St Marys	Destroyed	Residual	293870	6261971	35.5	3 - 6	29.5 - 32.5	Unable to Locate
BH117	-	M12	Destroyed	Unknown	291107	6251013	65.1	6.4 - 12.4	52.7 - 58.7	Destroyed in M12 construction.
BH119	-	M12	Destroyed	Unknown	291372	6249710	54	6.1 - 12.1	41.9 - 47.9	Destroyed in M12 construction.



Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
BH14	-	Orchard Hills	Removed	Bedrock	291788	6259692	49.6	6 - 9	40.6 - 43.6	Removed from program - requires TC Nightworks
BH17	-	Orchard Hills	Unable to Locate	Unknown	292165	6259690	50.9	6 - 9	41.9 - 44.9	Unable to Locate
BH-C-01	-	WSI	Unknown condition	Alluvium	287923	6247697	54.2	0.5 - 5	49.2 - 53.7	Destroyed by earthworks
BH-C-05	-	WSI	Destroyed	Alluvium	291773	6248524	59.3	5 - 12	47.3 - 54.3	Destroyed by construction south of leachate pond.
BH-C-08	-	WSI	Destroyed	Bedrock	291569	6249582	57.6	4 - 12	45.6 - 53.6	Destroyed by construction of Seymour White slip road.
BH-D-174	-	WSI	Unknown condition	Unknown	290297	6249365	81.6	NK	NK	Destroyed by earthworks
BH-D-175	-	Airport Dive Portal	Unknown condition	Unknown	289796	6248515	81.4	NK	NK	Destroyed by earthworks
BH-R-01	-	WSI	Destroyed	Bedrock	291387	6249658	55.7	14 - 20	35.7 - 41.7	Destroyed by Elizabeth drive upgrades.
BH-R-08	-	WSI	Destroyed	Bedrock	290643	6248549	61.5	24 - 30	31.5 - 37.5	Destroyed in bulk earthworks
BH-R-21	-	WSI	Destroyed	Bedrock	289222	6247676	78.6	12.5 - 18.5	60.1 - 66.1	Destroyed in bulk earthworks
BH-R-34	-	WSI	Unknown condition	Bedrock	288713	6246218	71.1	4 - 10	61.1 - 67.1	Well locked, owner permission denied





SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Well ID	Alternate ID	Monitoring Zone	Current Well Status	Aquifer	Easting	Northing	TOC Elevation (mAHD)	Screen Interval (mBGL)	Screen Interval (mAHD)	Comment
BH-R-42	-	WSI	Unknown condition	Bedrock	289880	6247019	81.3	18 - 24	57.3 - 63.3	Well locked, owner permission denied
F Deep	-	WSI	Unknown condition	Bedrock	288859	6245870	69.9	27.3 - 30.3	39.6 - 42.6	Well locked, owner permission denied
F Shallow	-	WSI	Unknown condition	Residual	288859	6245870	69.9	3 - 6	63.9 - 66.9	Well locked, owner permission denied
GW105054	-	Luddenham Road	Removed	Unknown	291424	6256068	NK	NK	NK	Removed from program - 3rd party data available
GW105382	-	Luddenham Road	Unable to locate	Unknown	291651	6255672	NK	NK	NK	Unable to locate
GW110454	-	Luddenham Road	Removed	Unknown	290961	6256815	NK	NK	NK	Removed from program - 3rd party data available
GW110455	-	Luddenham Road	Removed	Unknown	291628	6256774	NK	NK	NK	Removed from program - 3rd party data available
K	-	WSI	Unknown condition	Bedrock	289587	6248317	72	29.3 - 32.3	39.7 - 42.7	Destroyed by earthworks
MW2	-	St Marys	Unable to Locate	Unknown	293887	6261983	NK	4.3 - 7.3	NK	Unable to Locate



1.1 Baseline Groundwater Quality Review

Groundwater electrical conductivity, and concentrations of chloride, magnesium, sulfate, and sulfate as a percentage in EC in groundwater along the alignment are shown in Figures 8-5 to 8-8. Locations have been categorised based on the sampling interval and aquifer monitored.

Groundwater along the alignment is generally neutral to acidic, ranging from 3.87 – 11.74 pH units (average pH of 6.54). Generally, pH readings were below 8 pH units, with the exception of SBT-GW-4005 (8.34 – 10.08 pH units), SBT-GW-0001 (6.48 – 8.64 pH units), SBT-GW-1803 (9.76 – 9.95 pH units), SBT-GW-1806 (11.25 – 11.74 pH units) and SMGW-BH-A107 (7.26 – 8.11 pH units).

Laboratory reported pH ranged from 3.65 to 12.20 (average pH of 7.18) and was generally consistent with field reported pH.

Based on laboratory measured EC and TDS, the groundwater along the alignment ranges from fresh to saline, with the EC averaging 20mS/cm. The groundwater EC is typically higher in wells screened in the bedrock and residual soils (Figure 1).

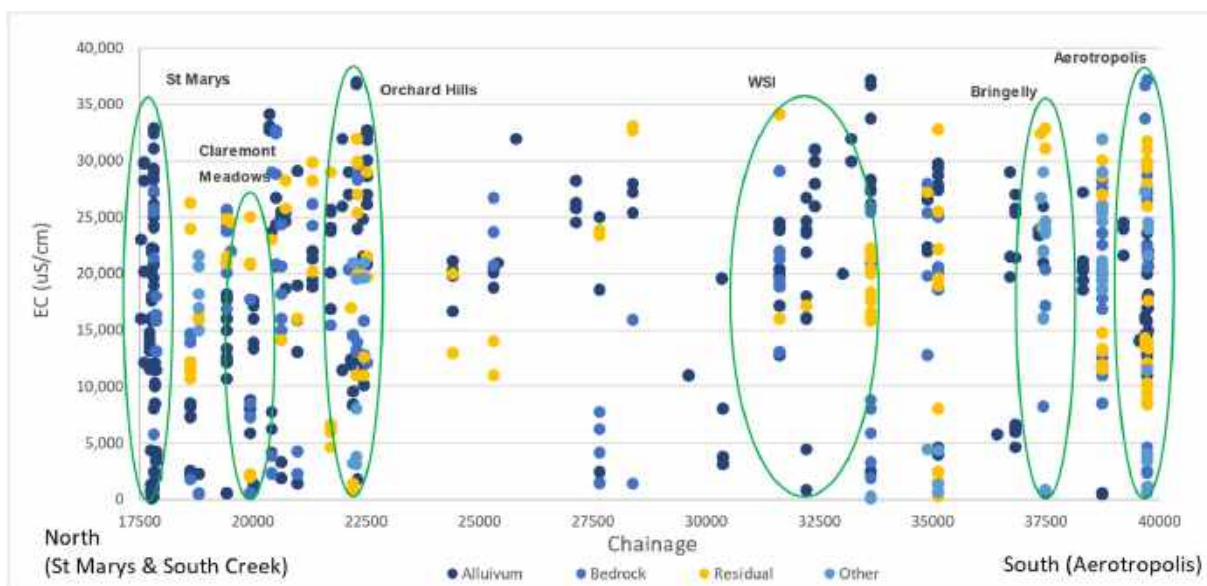


Figure 1: Laboratory Electrical Conductivity along the alignment between St Marys and Aerotropolis

Where available, field electrical conductivity and laboratory measured TDS data confirm laboratory EC results..

Chloride concentrations in groundwater varied widely along the alignment ranging from 4 mg/L to 19,000 mg/L. Concentrations of chloride in groundwater are broadly consistent with TDS and EC (Figure 2).

The grey dashed line at 6,000mg/L in Figure 2 represents the Australian Standard AS2159 – 2009 (Piling – Design and installation) adopted screening criteria guideline for chloride impacts to concrete piles in soils. The concentrations of chloride along the alignment mostly exceed the adopted screening criteria guidelines for chloride impacts to concrete piles in soils, placing portions of the alignment into the mild to severe aggressive classification.



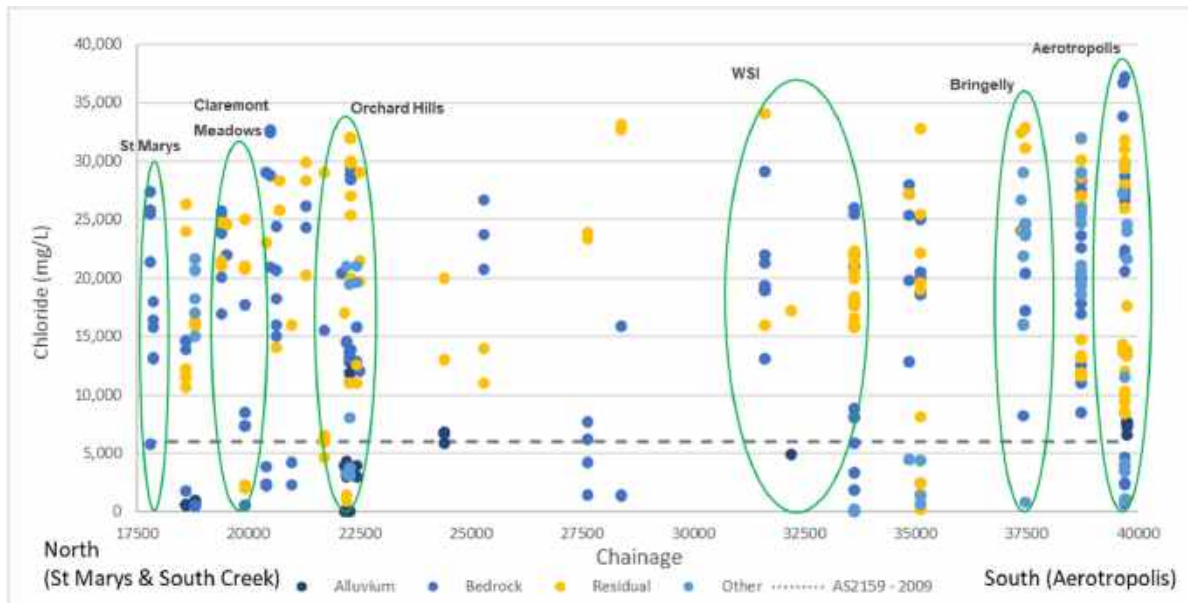


Figure 2: Chloride concentrations along the alignment between St Marys and Aerotropolis

Sulfate concentrations in groundwater along the alignment groundwater varied widely, with concentrations ranging from 2 mg/L (SMGW-BH-A105 and SMGW-BH-A107) in the northern tunnels to 3,110 mg/L (SBT-GW-1234) at St Marys. The grey dashed line at 1,000 mg/L in Figure 3 shows the Australian Standard AS2159 – 2009 (Piling – Design and installation) adopted screening criteria guideline for sulfate impacts to concrete piles in soils, placing portions of the alignment into the mild to moderate aggressive exposure classifications.

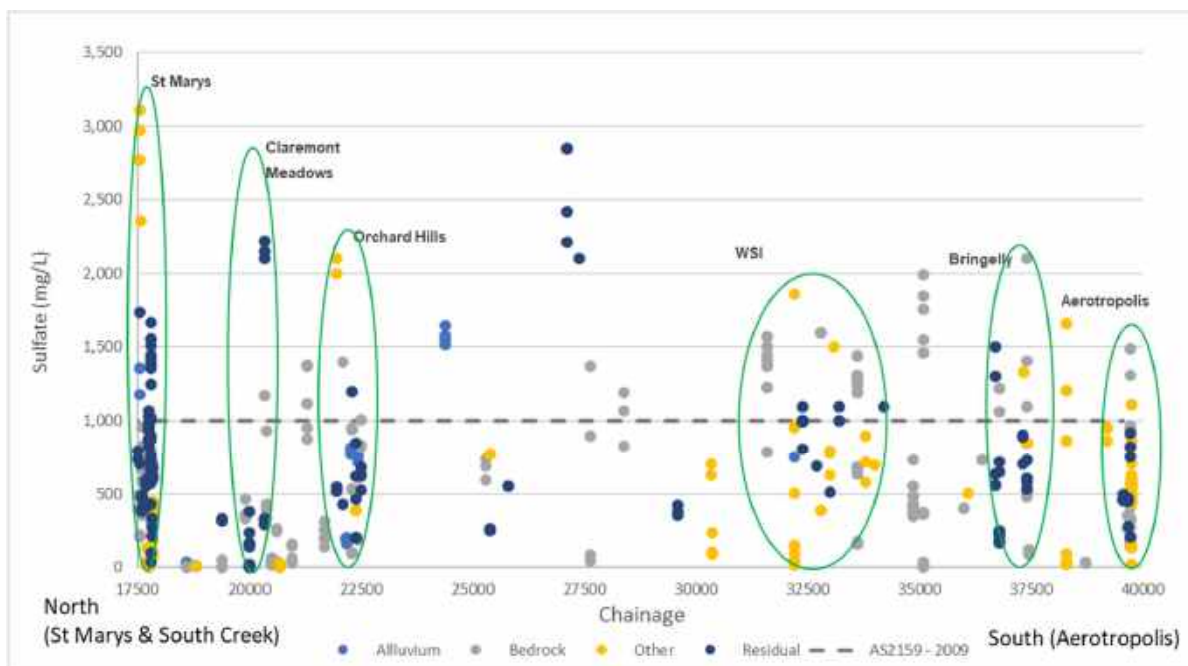


Figure 3: Sulfate concentrations along the alignment between St Marys and Aerotropolis



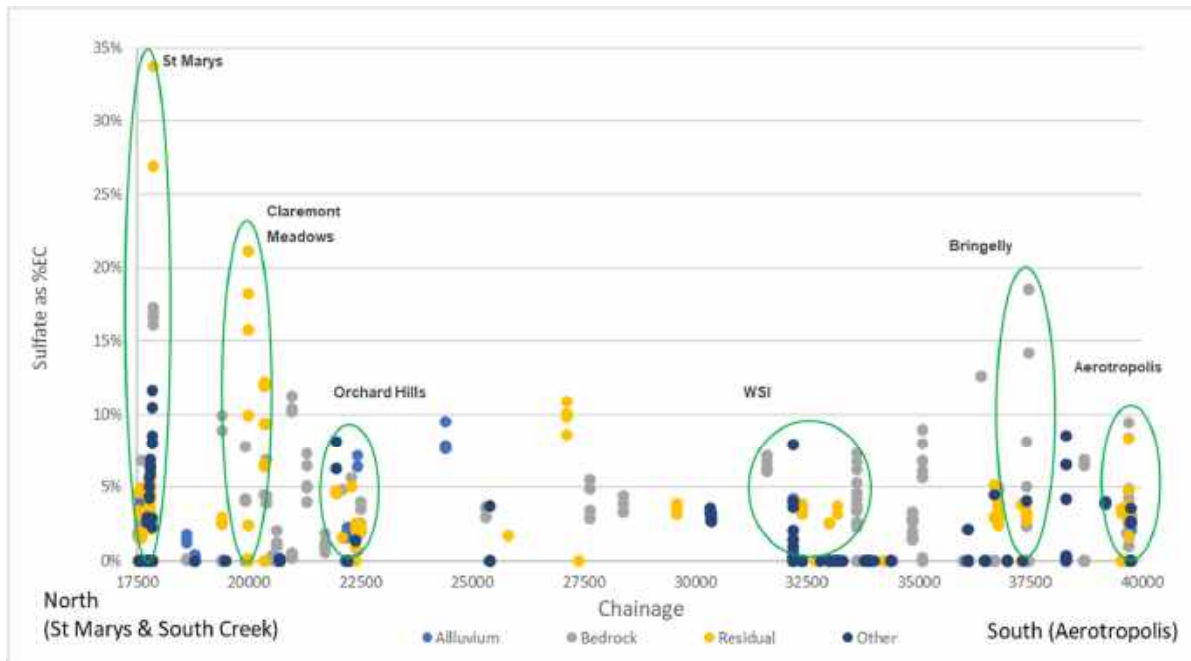


Figure 4: Sulfate as a % of EC along the alignment between St Marys and Aerotropolis

Sulfate (as SO_4) as a percentage (%) of EC in groundwater ranges from 0.0% to 33.8%, with the majority of results reported less than 10%. Where the sulfate concentrations as a percentage of EC are low, this can indicate that organic compounds, such as contamination with petroleum hydrocarbons, may be present. Sulfate (as SO_4) as a percentage (%) of EC was less than 1.0% at 18 locations. Locations where sulfate (as SO_4) as a percentage of EC was less than 1.0% are distributed along the entire alignment (Figure 4), with many between WSI and Bringelly.

Groundwater is typically sodium-chloride type water. The piper plot in Figure 5 shows the groundwater in St Marys, along the northern tunnel alignment to the Claremont Meadows Service Facility, and at some locations at Bringelly, has an increased sulfate and bicarbonate to chloride ratio, which is attributed to the hydrocarbon or other organic impact in groundwater in these areas.



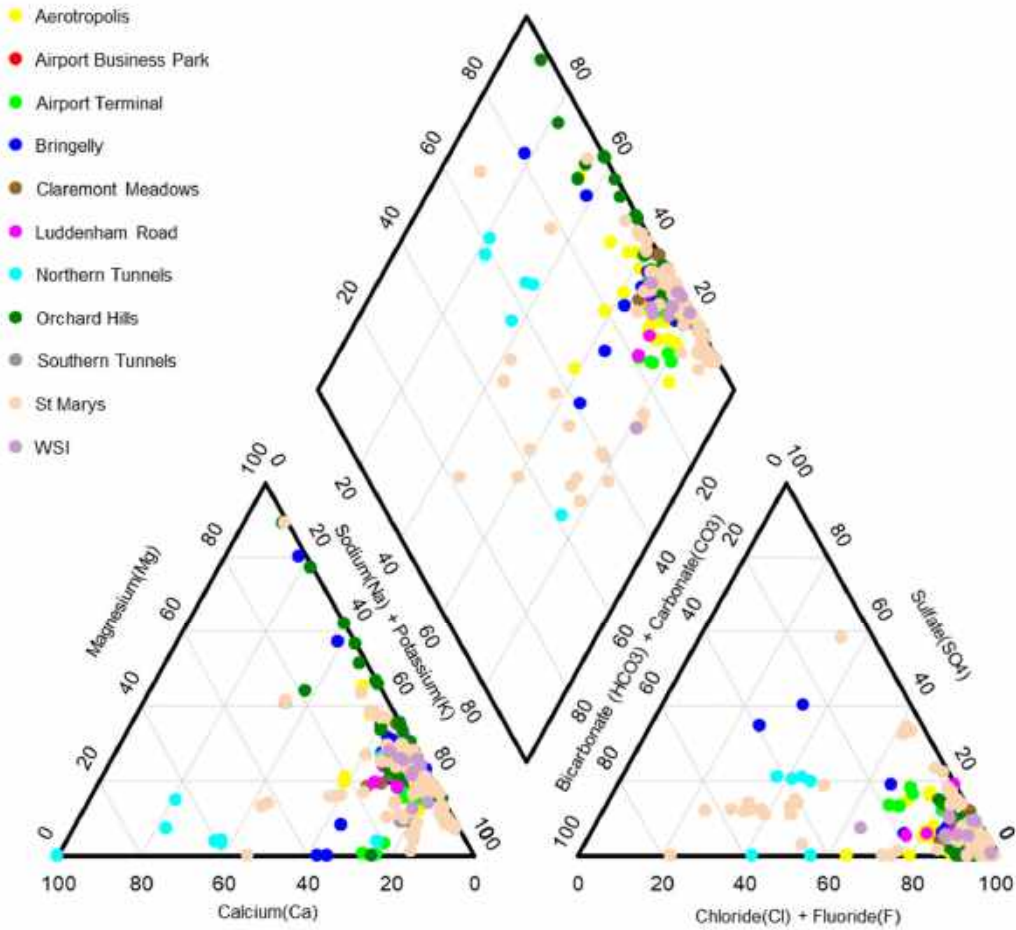


Figure 5: Piper diagram of groundwater quality by zone.



1.2 Groundwater Contamination Review

All available groundwater analytical data is tabulated and presented in Annexure D, and has been assessed against the adopted screening criteria outlined in Section 6.3.2 (main body of the GWMP). Laboratory analytical reports for groundwater baseline assessment monitoring completed from November 2022 – 28 July 2023 are provided in the Baseline Groundwater Assessment report.

Where available, groundwater contamination has been assessed for each section of the Project works area and is discussed in the below sections. Concentrations of key parameters are also shown on Figures B1 to B10, Annexure A of the Baseline Groundwater Assessment report.

1.2.1 St Marys Station

Table 1 provides a summary of the analytical results for the St Marys monitoring zone. Due to destroyed monitoring infrastructure (SMGW-BH-A103, SMGW-A202 and SMGW-A302), a groundwater well re-drill program was implemented to replace and refine these monitoring locations. SMGW-BH-A103 was replaced by SBT-GW-1803, while SMGW-A202 and SMGW-A302 were replaced by nested, multi-level mitigation monitoring wells; SBT-GW-1347a, SBT-GW-1347b, SBT-GW-1347c, SBT-GW-1348a, SBT-GW-1348b and SBT-GW-1348c installed in the vicinity of the original wells. The data associated with these replacement wells, has been included in this final iteration of the baseline assessment.

Groundwater sampled from all accessible groundwater wells exceeded the EPL limits and/or the adopted freshwater ecosystem screening criteria for one or more dissolved metal. The metal concentration in SMGW-BH-A002, which was sampled seven times between 2019 and 2021, varied over time indicating that metals concentrations in groundwater may not consistently exceed the ANZG 95% ecosystems protection guideline level. In SMGW-BH-A321 the concentration of select herbicides exceeded the appropriate ANZG ecosystems guideline. All were generally within the background ranges reported in groundwater monitoring events completed for previous investigations.

Detectable concentrations of BTEXN/ TRH were reported at five locations; SMGW-BH-A321, SBT-GW-1013, SBT-GW-1016, SBT-GW-1017, SBT-GW-1232 and SBT-GW-1233. Additional sampling was undertaken as part of the DSI phase (*St Marys Station Detailed Site Investigation* (Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040513)) to verify these results and concluded that that there is a potential minor source of hydrocarbons in groundwater (and potentially soil) which may require management during construction. All analytical results from groundwater sampled post-DSI were generally within the background ranges reported in groundwater monitoring events completed for previous investigations, and where silica-gel clean-up was undertaken concentrations were reported below the Limit of Reporting (LOR).

PFAS was detected in the majority of samples collected, with higher concentrations reported in monitoring wells in the vicinity of the former dry cleaners (1-7 Queen St) and from groundwater samples collected from SBT-GW-1021, north of the train line. The highest concentration of PFOS reported was from 1-7 Queen Street (MW1) was 1.07 µg/l. Dry cleaners are a known potential sources of PFAS. PFAS in groundwater exceeded the PFAS NEMP Freshwater Guidelines with the majority of samples where PFOS was detected exceeding the 95% species protection criteria (adjusted to 99% species protection criteria due to potential to bioaccumulate). PFOA was detected in groundwater samples, however concentrations were below the adopted screening criteria.

Significant chlorinated hydrocarbon contamination in groundwater has been identified beneath the former dry cleaner at 1-7 Queen St. This contamination has been investigated and management measures implemented to mitigate potential construction related risks and adverse changes in risk profile due to station excavation related drawdown associated with this impact.



Baseline groundwater quality associated with this contamination is reported in detail in the following reports:

- *Former Dry Cleaner, 1-7 Queen St – Assessment of Human Health Risk and Mitigation Options* report (Tetra Tech Major Projects, 2023 Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040540);
- *St Marys Station Detailed Site Investigation* (Tetra Tech Major Projects, 2023, Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040513); and

Mitigation, management and construction monitoring measures are detailed in:

- *St Marys Station - Remedial Action Plan* (Tetra Tech Major Projects, 2023, Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040521)
- *St Marys Station – Implementation of Permeable Reactive Barrier* (Tetra Tech Major Projects, 2023, Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040561.
- Off-Airport Sydney Metro Western Sydney Airport Construction Soil and Water Management Plan.



Table 3: Groundwater contamination summary – St Marys

Parameter		Units	Trigger values			St Marys - Alluvium				St Marys - Residual				St Marys - Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	Environmental protection license (EPL) ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			20 / 13	52	26,700	3,807	65 / 28	1,110	29,500	13,406	33 / 11	316	21,200	11,319
	Electrical Conductivity @ 25C (lab)	µS/cm			7,000	21 / 13	68	31,900	5,049	65 / 28	1,560	35,600	18,941	30 / 11	615	29,300	15,476
	pH (Field)	-	<5.5		6.5 - 8.0	16 / 13	4.64	8.64	6.07	47 / 28	3.87	8.26	5.64	17 / 11	5.41	9.95	6.98
	Redox Potential (Field)	mV				16 / 13	-72.60	301.20	88.29	46 / 28	-392.70	259.90	65.67	13 / 11	-167.20	149.80	-71.48
	Chloride	mg/L	6,000			40 / 13	4	12,200	3,051	87 / 28	201	12,600	7,133	46 / 11	111	10,700	5,906
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			40 / 13	3	3,110	555	87 / 28	33	1,740	712	46 / 11	16	961	439
	Bicarbonate Alkalinity as CaCO3	mg/L				39 / 13	2	491	149	86 / 28	<1	<20000	426	46 / 11	11	953	432
Nutrients	Nitrogen (Total)	µg/L			1,720	39 / 13	<300	7,900	2,208	88 / 28	<200	47,400	5,358	40 / 11	<600	80,500	11,601
	Phosphorus	µg/L			140	39 / 13	<10	640	189	89 / 28	<20	33,200	2,137	44 / 11	<10	29,400	2,523
	Ammonia as N	µg/L		900	900	40 / 13	<10	4,350	944	90 / 28	<10	8,650	596	46 / 11	30	42,500	4,200
	Nitrate (as NO3-N)	µg/L				39 / 13	<10	2,580	405	89 / 28	<10	3,330	163	46 / 11	<10	3,430	130
Metals (dissolved)	Aluminium	µg/L		55	80	20 / 13	<10	1,300	144	66 / 28	<10	14,700	716	34 / 11	<10	80	21
	Chromium (III+VI)	µg/L		1	1	47 / 13	<1	24	2	95 / 28	<1	12	2	45 / 11	<1	58	3
	Chromium (hexavalent)	µg/L		1	1	8 / 13	<10	<100	21	15 / 28	<10	<10	10	6 / 11	<10	<10	10
	Cobalt	µg/L				20 / 13	<1	260	38	67 / 28	<1	894	165	36 / 11	<1	212	29
	Copper	µg/L		1.4	1.4	47 / 13	<1	517	13	95 / 28	<1	3,240	110	46 / 11	<1	53	3
	Iron	µg/L				22 / 13	<50	67,100	6,745	78 / 28	<50	25,000	5,893	44 / 11	<50	18,500	2,043
	Manganese	µg/L		1,900		20 / 13	<1	537	159	76 / 28	<8	22,300	2,936	41 / 11	<1	3,650	870
	Zinc	µg/L		8	15	47 / 13	<5	214	48	95 / 28	<5	1,750	129	45 / 11	<5	3,140	91
TPH	C6 - C9	µg/L				45 / 13	<20	5,300	740	88 / 28	<20	26,900	1,685	32 / 11	<20	1,990	249
	C10 - C36 (Sum of total)	µg/L				46 / 13	<50	1,310	88	87 / 28	<50	500	88	31 / 11	<50	570	95
PFAS	Perfluorooctane-sulfonic acid (PFOS) ²	µg/L		0.00023		43 / 13	<0.0004	1.07	0.23	81 / 28	<0.0002	0.13	0.01	34 / 11	<0.0002	0.43	0.05
	Perfluorooctanoic acid (PFOA) ²	µg/L		19		43 / 13	<0.0007	0.058	0.016	81 / 28	<0.0006	0.362	0.024	34 / 11	<0.0004	<0.05	0.011
	Sum (PFHxS + PFOS)	µg/L				43 / 13	<0.0012	1.070	0.231	81 / 28	<0.0003	0.275	0.022	34 / 11	<0.0005	0.441	0.054

1. EPL No. 21672, amended 9 February 2023
2. Adjusted to 99% species protection criteria due to potential for bioaccumulation



1.2.2 Claremont Meadows Service Facility

Limited additional monitoring has been conducted in the vicinity of the Claremont Meadows Service Facility as part of the baseline monitoring assessment due to access constraints (due to asbestos containing material on surface around SBT-GW-1028) and destroyed monitoring infrastructure (SMGW-BH-A109S). The groundwater well re-drill program to replace and refined the monitoring location for SMGW-BH-A109S, with data from the replacement well (SBT-GW-1805), included in the baseline assessment.

The DSI for this site was completed by Environmental Earth Sciences in September 2022, with limited groundwater sampling undertaken. The available data has also been considered in this baseline assessment.

A summary of groundwater quality and contamination for the Claremont Meadows Service Facility monitoring zone is provided in Table 2.

Groundwater sampled from all accessible groundwater wells exceeded the EPL limits and/or the adopted freshwater ecosystem screening criteria for one or more dissolved metal, and total nitrogen and phosphorus. Mean zinc concentrations exceeded the EPL limits in all three aquifers and means concentrations of copper in the residual and bedrock aquifers. Dissolved metal concentrations in SBT-CM-1030 were an order of magnitude or more higher than in other wells, with notable dissolved aluminium concentrations of >6.5mg/L and cobalt >300ug/L reported for all three sampling events. SBT-CM-1030 is screened within the residual aquifer to the south of the service facility, within 20m of the rail tunnel, between the Gipps St Landfill and XP-N14.

Detectable concentrations of TRH C6-C9 and C10-C36 were reported in SBT-GW-1024 which is to the east of the service facility shaft and downgradient (west) of a petrol station. TRH C10-C36 detects were removed with silica-gel clean-up indicating the material was likely degraded petroleum hydrocarbon. TPH C6-C9 of up to 2.1mg/L was also reported in December 2022, however the nature of the hydrocarbon is unknown as BTEX compounds and chlorinated hydrocarbons were <LOR.

Detectable concentrations of PFAS were reported in SBT-GW-1024, SBT-CM-1030, SBT-GW-1031 and SMGW-BH-A304, with concentrations of PFOS exceeding the PFAS NEMP Freshwater Guidelines with 99% species protection. PFOA was also detected in groundwater samples however concentrations were below the adopted screening criteria.

With the exception of SBT-CM-1030 and SBT-GW-1024, concentrations were generally within the range reported in pre-award data.



Table 4: Groundwater contamination summary – Claremont Meadows Service Facility

Parameter		Units	Trigger values			Claremont Meadows - Alluvium				Claremont Meadows - Residual				Claremont Meadows - Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	Environmental protection license (EPL) ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			4 / 1	3,900	5,500	5,078	17 / 5	540	27,700	8,474	6 / 3	1,430	20,700	12,942
	Electrical Conductivity @ 25C (lab)	µS/cm			7,000	4 / 1	5,900	8,840	7,718	16 / 5	876	34,100	12,093	5 / 3	1,840	26,100	16,378
	pH (Field)	-	<5.5		6.5 - 8.0	2 / 1	5.84	6.11	5.98	7 / 5	3.90	6.60	5.02	6 / 3	6.30	7.90	6.89
	Redox Potential (Field)	mV				2 / 1	-75.40	-60.40	-67.90	6 / 5	-43.20	249.60	151.62	5 / 3	-28.30	103.50	50.28
	Chloride	mg/L	6,000			4 / 1	2,890	3,600	3,095	17 / 5	65	12,300	4,265	6 / 3	559	11,700	6,607
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			4 / 1	333	460	373	17 / 5	<1	2,220	524	6 / 3	38	1,360	519
	Bicarbonate Alkalinity as CaCO3	mg/L				4 / 1	82,000	230,000	147,000	17 / 5	<1	720	277	6 / 3	68	647	416
Nutrients	Nitrogen (Total)	µg/L			1,720	4 / 1	800	5,000	2,525	15 / 5	<200	19,900	5,467	5 / 3	700	9,000	3,860
	Phosphorus	µg/L			140	0 / 1	-	-	-	17 / 5	<20	6,640	1,101	5 / 3	70	820	382
	Ammonia as N	µg/L		900	900	4 / 1	90	240	140	20 / 5	<10	3,160	870	5 / 3	60	3,980	1,698
	Nitrate (as NO3-N)	µg/L				4 / 1	<10	2,670	795	20 / 5	<5	1,380	314	5 / 3	<10	4,180	968
Metals (dissolved)	Aluminium	µg/L		55	80	4 / 1	<10	<50	20	19 / 5	<10	7,540	1,141	6 / 3	<10	<100	40
	Chromium (III+VI)	µg/L		1	1	4 / 1	<1	<1	1	19 / 5	<1	<10	3	6 / 3	<1	<10	4
	Chromium (hexavalent)	µg/L		1	1	3 / 1	<10	<10	10	1 / 5	<10	<10	10	2 / 3	<10	<10	10
	Cobalt	µg/L				4 / 1	50	57	53	18 / 5	<1	343	58	5 / 3	<1	<10	4
	Copper	µg/L		1.4	1.4	4 / 1	<1	1	1	18 / 5	<1	26	6	6 / 3	<1	<10	3
	Iron	µg/L				4 / 1	1,220	6,950	5,378	17 / 5	<50	4,100	981	6 / 3	<50	6,000	1,107
	Manganese	µg/L		1,900		4 / 1	1,190	1,600	1,428	19 / 5	6	5,210	1,220	6 / 3	13	2,900	829
TPH	Zinc	µg/L		8	15	4 / 1	20	23	22	18 / 5	<2	542	71	6 / 3	<5	51	24
	C6 - C9	µg/L				4 / 1	130	2,100	735	11 / 5	<10	<20	19	6 / 3	<20	<20	20
	C10 - C36 (Sum of total)	µg/L				4 / 1	<50	590	185	10 / 5	<50	<100	70	6 / 3	<50	<100	58
PFAS	Perfluorooctane-sulfonic acid (PFOS) ²	µg/L		0.00023		3 / 1	<0.01	<0.01	0.01	10 / 5	<0.0001	<0.01	0.01	4 / 3	<0.01	0.01	0.01
	Perfluorooctanoic acid (PFOA) ²	µg/L		19		3 / 1	<0.01	0.04	0.03	10 / 5	<0.01	0.04	0.02	4 / 3	<0.01	<0.01	0.01
	Sum (PFHxS + PFOS)	µg/L				3 / 1	<0.01	0.03	0.02	10 / 5	<0.001	0.01	0.01	4 / 3	<0.01	0.01	0.01

1. EPL No. 21672, amended 9 February 2023
2. Adjusted to 99% species protection criteria due to potential for bioaccumulation

1.2.3 Orchard Hills Station

A summary of groundwater quality and contamination for the Orchard Hills monitoring zone is provided in Table 3. Due to destroyed monitoring infrastructure (SMGW-BH-A107, SMGW-BH-A117 and SMGW-BH-A117S) a groundwater well re-drill program was undertaken to replace and refine three monitoring locations. SMGW-BH-A107, SMGW-BH-A117 and SMGW-BH-A117S were replaced by SBT-GW-1806, SBT-GW-1807 and SBT-GW-1808 respectively. The data associated with these replacement wells, has been included in the baseline assessment.

Groundwater sampled from all accessible groundwater wells exceeded the EPL limits and/or the adopted freshwater ecosystem screening criteria for one or more dissolved metal. Metal concentrations were highest in shallow groundwater in SBT-GW-1042, SBT-GW-1043 and SBT-GW-1048 on the eastern side of Orchard Hills Station, and SMGW-BH-A117S and SBT-GW-1808 (replacement for SMGW-BH-A117S) on the southern side of the Station. All locations with significant metal impact are within the area where >2m drawdown is predicted during construction.

Detectable concentrations of BTEXN/ TRH were reported at seven locations: BH-A372, SMGW-BH-A017, SMGW-BH-A113, SMGW-BH-A310, SMGW-BH-A315, SMGW-BH-A413S and SBT-GW-1806. Additional sampling was undertaken as part of the DSI phase to verify these results and concluded that there is a potential minor source of hydrocarbons in groundwater (and potentially soil) which may require management during construction. All analytical results from groundwater sampled post-DSI were generally within the background ranges reported in groundwater monitoring events completed for previous investigations, and where silica-gel clean-up was undertaken concentrations were reported below the LOR.

PFOS was detected at three monitoring locations (SMGW-BH-A310, SMGW-BH-A315 and SMGW-BH-A315S) which exceeded the PFAS NEMP Freshwater Guidelines, adjusted to 99% species protection criteria due to potential to bioaccumulate. All remaining samples reported PFAS concentrations below the LOR.

Based on the available data mean EC, nitrogen, aluminium, copper, chromium and zinc concentrations in all three aquifers exceeded the EPL limits.



Table 5: Groundwater contamination summary – Orchard Hills

Parameter		Units	Trigger values			Orchard Hills Alluvium				Orchard Hills Residual				Orchard Hills Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	Environmental protection license (EPL) ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			12 / 7	5,120	26,600	11,458	10 / 11	7,120	21,700	15,693	20 / 14	875	25,200	17,477
	Electrical Conductivity @ 25C (lab)	µS/cm			7,000	13 / 7	8,300	37,000	17,888	20 / 11	2,820	31,900	19,716	26 / 14	1,240	35,600	22,391
	pH (Field)	-	<5.5		6.5 - 8.0	9 / 7	4.32	6.72	5.33	5 / 11	4.73	6.16	5.43	7 / 14	6.57	11.74	8.27
	Redox Potential (Field)	mV				9 / 7	-53.90	191.50	118.04	5 / 11	-43.80	203.30	82.68	4 / 14	-293.50	43.90	-143.05
	Chloride	mg/L	6,000			14 / 7	2,980	13,700	6,021	25 / 11	240	10,800	5,749	32 / 14	350	14,000	7,833
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			14 / 7	160	813	469	25 / 11	32	1,200	488	32 / 14	17	2,100	561
	Bicarbonate Alkalinity as CaCO3	mg/L				14 / 7	1	480	107	24 / 11	<3	<20000	1,713	30 / 14	<1	1,000	433
Nutrients	Nitrogen (Total)	µg/L			1,720	13 / 7	<200	183,000	29,543	18 / 11	<200	138,000	9,239	21 / 14	<200	5,100	2,795
	Phosphorus	µg/L			140	13 / 7	<10	3,700	671	18 / 11	<10	2,900	512	26 / 14	<10	610	115
	Ammonia as N	µg/L		900	900	14 / 7	70	780	374	25 / 11	30	840	208	32 / 14	80	5,110	1,987
	Nitrate (as NO3-N)	µg/L				14 / 7	<10	183,000	24,449	24 / 11	<5	113,000	4,730	30 / 14	<10	3,540	189
Metals (dissolved)	Aluminium	µg/L		55	80	12 / 7	<10	2,880	854	11 / 11	<10	2,360	834	22 / 14	<10	520	82
	Chromium (III+VI)	µg/L		1	1	17 / 7	<1	<10	3	27 / 11	<1	5	1	31 / 14	<1	53	5
	Chromium (hexavalent)	µg/L		1	1	6 / 7	<10	<10	10	6 / 11	<10	<10	10	5 / 14	<10	30	14
	Cobalt	µg/L				11 / 7	5	669	171	18 / 11	9	870	366	28 / 14	<1	647	87
	Copper	µg/L		1.4	1.4	16 / 7	<1	12	6	22 / 11	<1	134	14	31 / 14	<1	504	34
	Iron	µg/L				13 / 7	<100	23,700	6,390	13 / 11	<50	98,900	24,688	28 / 14	<50	115,000	14,402
	Manganese	µg/L		1,900		12 / 7	74	9,350	1,908	18 / 11	155	43,000	4,480	28 / 14	<1	1,130	597
	Zinc	µg/L		8	15	17 / 7	<5	833	234	27 / 11	<5	606	151	30 / 14	<5	363	52
TPH	C6 - C9	µg/L				18 / 7	<20	<20	20	23 / 11	<20	120	26	20 / 14	<20	100	28
	C10 - C36 (Sum of total)	µg/L				15 / 7	<50	650	100	20 / 11	<50	1,080	127	18 / 14	<50	300	84
PFAS	Perfluorooctane-sulfonic acid (PFOS) ²	µg/L		0.00023		13 / 7	<0.0003	<0.01	0.008	20 / 11	<0.0001	<0.01	0.006	19 / 14	<0.0001	<0.05	0.011
	Perfluorooctanoic acid (PFOA) ²	µg/L		19		13 / 7	<0.0006	<0.01	0.008	20 / 11	<0.0006	<0.01	0.008	19 / 14	<0.01	<0.05	0.013
	Sum (PFHxS + PFOS)	µg/L				13 / 7	<0.0006	<0.01	0.008	20 / 11	<0.0007	<0.01	0.006	19 / 14	<0.001	<0.05	0.011

1. EPL No. 21672, amended 9 February 2023

2. Adjusted to 99% species protection criteria due to potential for bioaccumulation



1.2.4 Western Sydney International tunnel portal and Airport Terminal Station

Table 6 provides a summary of the analytical results for groundwater quality in the vicinity of the WSI tunnel portal and Airport Terminal Station. Due to access constraints, limited additional baseline data has been collected for this area away from the excavation areas. All relevant stakeholders were contacted on numerous occasions, with access either declined or no response provided (discussed in Section 7 of the Baseline Groundwater Assessment report).

Groundwater sampled from all accessible groundwater wells exceeded the AEPR and/or adopted freshwater ecosystem screening criteria for one or more dissolved metal, and nitrogen and phosphorus. Mean zinc concentrations in all three aquifers exceeded the AEPR limits, as did aluminium in the bedrock aquifer; and copper and iron in the alluvium and bedrock aquifers. In general, the reported concentrations were within the range reported in pre-award data.

Detectable concentrations of TRH were reported in Airport Terminal wells SBT-GW-3012-B, SBT-GW-3022 and SBT-GW-4000; and in Western Sydney International wells SMGW-GW-C001S, SMGW-BH-C302, SMGW-BH-C305, SMGW-BH-C322, SMGW-BH-C344, SMGW-BH-C350, SMGW-BH-C351, SMGW-BH-C352, WSA GW16 and WSA GW21. Reported concentrations were below the adopted criteria, with the exception of SBT-GW-3012-B, SBT-GW-4000, SMGW-GW-C001S, SMGW-BH-C322, WSA GW16 and WSA GW21 which exceeded the AEPR limits and/or adopted freshwater ecosystem screening criteria.

The maximum TRH C6-C9 concentration of 650ug/L was reported in SMGW-BH-C001S when sampled in September 2019, the majority of which is due to Toluene 526ug/L. SMGW-BH-C001S is on the southern WSI boundary, adjacent to Badgery Creek, and outside the predicted influence of construction related drawdown.

Detectable concentrations of PFOS were detected in SMGW-BH-C301, SMGW-BH-C320, SMGW-BH-C321, SMGW-BH-C325, SMGW-BH-C331, SMGW-BH-C341, SMGW-BH-C342 and WSA GW17 which exceeded the PFAS NEMP Freshwater Guidelines with 99% species protection. PFOA was also detected in groundwater samples, however concentrations were below the adopted screening criteria.



Table 6: Groundwater contamination summary – Airport Land

Parameter		Units	Trigger values			Airport Alluvium				Airport Residual				Airport Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	AEPR (1997) - Table 1.03 Freshwater ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			10 / 25	468	20,000	12,308	4 / 9	2,750	17,400	12,663	31 / 18	1,500	36,400	17,743
	Electrical Conductivity @ 25C (lab)	µS/cm				11 / 25	826	26,700	18,170	21 / 9	4,670	32,000	22,113	32 / 18	2,340	37,200	22,474
	pH (Field)	-	<5.5		6.5-9	133 / 25	5.49	8.38	6.64	4 / 9	6.93	7.48	7.19	84 / 18	5.11	7.82	6.81
	Redox Potential (Field)	mV				72 / 25	-271.70	154.10	-60.35	4 / 9	-184.20	-8.30	-108.93	56 / 18	-337.10	193.40	-45.45
	Chloride	mg/L	6,000			22 / 25	147	11,000	6,711	23 / 9	1,080	11,000	7,250	34 / 18	615	12,300	7,540
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			22 / 25	12	1,860	593	23 / 9	168	1,500	784	34 / 18	3	1,990	823
	Bicarbonate Alkalinity as CaCO3	mg/L				22 / 25	19	1,400	794	23 / 9	160	1,400	891	34 / 18	<1	11,000	1,035
Nutrients	Nitrogen (Total)	µg/L			100	105 / 25	<200	70,000	3,093	4 / 9	<500	6,900	2,900	70 / 18	<200	16,200	4,771
	Phosphorus	µg/L			10	14 / 25	<20	330	106	9 / 9	<10	460	126	32 / 18	<50	8,620	1,273
	Ammonia as N	µg/L		900		118 / 25	<10	13,000	1,643	23 / 9	<10	1,940	328	73 / 18	<20	8,200	2,161
	Nitrate (as NO3-N)	µg/L				110 / 25	<6	91,000	1,032	23 / 9	<5	5,360	263	68 / 18	<10	14,200	1,246
Metals (dissolved)	Aluminium	µg/L		55	100	13 / 25	<10	220	47	16 / 9	<10	<50	35	33 / 18	<10	5,310	339
	Chromium (III+VI)	µg/L		1	10	109 / 25	<1	4	1	23 / 9	<1	8	2	69 / 18	<1	<20	4
	Chromium (hexavalent)	µg/L		1	10	0 / 25	-	-	-	4 / 9	<10	<10	10	23 / 18	<10	<10	10
	Cobalt	µg/L				22 / 25	<1	30	8	23 / 9	<1	28	8	35 / 18	<1	490	44
	Copper	µg/L		1.4	2	107 / 25	<1	87	10	18 / 9	<1	1	1	68 / 18	<1	43	8
	Iron	µg/L			1000	47 / 25	<0.01	24,000	704	21 / 9	<10	880	326	44 / 18	<0.01	3,520	866
	Manganese	µg/L		1,900		22 / 25	1	4,550	793	23 / 9	6	2,700	1,327	35 / 18	20	23,000	2,689
	Zinc	µg/L		8	5	109 / 25	<5	290	48	22 / 9	<5	140	26	69 / 18	<5	1,090	71
TPH	C6 - C9	µg/L			150	109 / 25	<10	650	27	20 / 9	<10	61	22	70 / 18	<20	50	20
	C10 - C36 (Sum of total)	µg/L			600	106 / 25	<0	1,130	121	20 / 9	<0	300	105	70 / 18	<50	3,300	163
PFAS	Perfluorooctane-sulfonic acid (PFOS) ¹	µg/L		0.00023 ²		39 / 25	<0.0001	<0.05	0.01	20 / 9	<0.0001	<0.01	0.002	31 / 18	<0.0001	<0.01	0.009
	Perfluorooctanoic acid (PFOA) ¹	µg/L		19 ²		39 / 25	<0.0002	<0.05	0.012	20 / 9	<0.0002	<0.01	0.009	31 / 18	<0.01	0.050	0.011
	Sum (PFHxS + PFOS)	µg/L				39 / 25	<0.0002	<0.05	0.010	20 / 9	<0.0002	<0.01	0.003	31 / 18	<0.001	0.018	0.010

1. Airports (Environment Protection) Regulations (AEPR) 1997
2. Adjusted to 99% species protection criteria due to potential for bioaccumulation



1.2.5 Bringelly Services Facility

Three onsite monitoring bores (SBT-GW-4002, SBT-GW-4020 and SBT-GW-4022) destroyed at the Bringelly Service Facility were included in the groundwater well re-drill program and replaced by SBT-GW-4800, SBT-GW-4801 and SBT-GW-4802 respectively. The data from both the initial and replacement wells has been included in the baseline assessment.

Table 7 provides a summary of the currently available analytical results for the Bringelly Services Facility monitoring zone.

Groundwater sampled from all accessible groundwater wells exceeded the EPL limits and/or the adopted freshwater ecosystem screening criteria for one or more dissolved metal. Mean copper and zinc concentrations exceeded the EPL limits in the alluvium aquifer, with the highest concentrations reported in SBT-GW-4005, where groundwater is relatively fresh. The reported concentrations were generally within the range reported in pre-award data.

Detectable concentrations of BTEXN/ TRH were reported at two locations; SMGW-BH-D305 and SBT-GW-4003. All analytical results from groundwater sampled post-DSI were generally within the background ranges reported in groundwater monitoring events completed for previous investigations, and where silica-gel clean-up was undertaken concentrations were reported below the LOR.

Detectable concentrations of PFOS were reported in SBT-GW-4002 and SBT-GW-4005, exceeding the PFAS NEMP Freshwater Guidelines with 99% species protection. PFOA was also detected in groundwater samples, however concentrations were below the adopted screening criteria.



Table 7: Groundwater contamination summary – Bringelly

Parameter		Units	Trigger values			Bringelly - Alluvium				Bringelly Residual				Bringelly Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	Environmental protection license (EPL) ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			1 / 2	14,000	14,000	14,000	6 / 3	11,200	16,600	13,683	7 / 11	448	17,000	10,446
	Electrical Conductivity @ 25C (lab)	µS/cm			7,000	1 / 2	21,000	21,000	21,000	6 / 3	18,600	23,900	21,017	16 / 11	648	32,000	21,806
	pH (Field)	-	<5.5		6.5 - 8.0	0 / 2	-	-	-	6 / 3	6.62	7.15	6.86	4 / 11	6.79	10.08	8.07
	Redox Potential (Field)	mV				0 / 2	-	-	-	6 / 3	-227.20	175.40	-39.52	4 / 11	-170.50	176.20	2.22
	Chloride	mg/L	6,000			2 / 2	8,300	8,480	8,390	7 / 3	6,150	7,900	7,036	22 / 11	64	19,000	7,749
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			2 / 2	850	1,330	1,090	7 / 3	532	906	708	22 / 11	72	2,200	985
	Bicarbonate Alkalinity as CaCO3	mg/L				2 / 2	760,000	938,000	849,000	7 / 3	853	1,120	967	22 / 11	<1	1,200	777
Nutrients	Nitrogen (Total)	µg/L			1,720	2 / 2	1,000	2,900	1,950	7 / 3	600	5,700	2,357	12 / 11	1,300	6,100	3,275
	Phosphorus	µg/L			140	2 / 2	<10	<50	30	7 / 3	<50	2,200	530	13 / 11	<10	2,200	256
	Ammonia as N	µg/L		900	900	2 / 2	810	3,400	2,105	7 / 3	<100	1,730	769	22 / 11	20	4,400	1,213
	Nitrate (as NO3-N)	µg/L				2 / 2	<10	<20	15	7 / 3	<10	20	11	21 / 11	<5	3,300	310
Metals (dissolved)	Aluminium	µg/L		55	80	1 / 2	<50	<50	50	6 / 3	<10	60	18	17 / 11	<10	600	99
	Chromium (III+VI)	µg/L		1	1	2 / 2	<1	<1	1	9 / 3	<1	<1	1	23 / 11	<1	30	3
	Chromium (hexavalent)	µg/L		1	1	0 / 2	-	-	-	1 / 3	<10	<10	10	1 / 11	<10	<10	10
	Cobalt	µg/L				1 / 2	2	2	2	6 / 3	6	16	10	19 / 11	<1	16	3
	Copper	µg/L		1.4	1.4	2 / 2	1	4	3	9 / 3	<1	2	1	18 / 11	<1	41	5
	Iron	µg/L				1 / 2	210	210	210	6 / 3	<50	7,840	2,242	19 / 11	<10	7,840	221
	Manganese	µg/L		1,900		1 / 2	200	200	200	6 / 3	174	1,680	686	18 / 11	<1	1,680	564
	Zinc	µg/L		8	15	1 / 2	17	17	17	9 / 3	<5	15	9	18 / 11	<3	40	14
TPH	C6 - C9	µg/L				2 / 2	<20	<20	20	9 / 3	<20	20	20	15 / 11	<20	<20	20
	C10 - C36 (Sum of total)	µg/L				2 / 2	<50	<100	75	8 / 3	<50	<100	56	15 / 11	<50	<100	63
PFAS	Perfluorooctane-sulfonic acid (PFOS) ²	µg/L		0.00023		2 / 2	<0.0001	<0.0003	0.0002	8 / 3	<0.0003	<0.01	0.01	15 / 11	<0.0001	8.0000	0.0058
	Perfluorooctanoic acid (PFOA) ²	µg/L		19		2 / 2	<0.0006	<0.01	0.005	8 / 3	<0.0005	<0.01	0.009	15 / 11	<0.0005	<0.01	0.009
	Sum (PFHxS + PFOS)	µg/L				2 / 2	<0.0003	<0.001	0.001	8 / 3	<0.0003	<0.01	0.008	15 / 11	<0.0006	8.000	0.006

1. EPL No. 21672, amended 9 February 2023
2. Adjusted to 99% species protection criteria due to potential for bioaccumulation



1.2.6 Aerotropolis Core Station

Table 8 provides a summary of the analytical groundwater quality results for the Aerotropolis Core Station monitoring zone. One groundwater monitoring location (SMGW-BH-D310) destroyed during site works was to be replaced, with the data from both the original and replacement well (SBT-GW-4803) included in the baseline assessment.

Groundwater sampled from all accessible groundwater wells exceeded the EPL and/or the adopted freshwater ecosystem screening criteria for one or more dissolved metal. Cadmium concentrations exceeded the adopted criteria in five locations and, consistent with groundwater elsewhere along the alignment, the mean copper concentrations in all aquifers exceeded the EPL. In general, the reported concentrations were within the range of concentrations reported in pre-award groundwater samples.

PFAS was detected in SMGW-BH-D401, MW-01 and MW-205 with concentrations of PFOS exceeding the PFAS NEMP Freshwater Guidelines with 99% species protection. PFOA was also detected in groundwater samples however concentrations were below the adopted screening criteria.

Detectable concentrations of nutrients including ammonia, speciated nitrogen and phosphorous were reported in all groundwater samples, with the mean concentration of ammonia and phosphorous exceeding the adopted screening criteria in the alluvium, residual and bedrock aquifers.



Table 8: Groundwater contamination summary – Aerotropolis

Parameter		Units	Trigger values			Aerotropolis - Alluvium				Aerotropolis - Residual				Aerotropolis - Bedrock			
			AS2159 – 2009 Piling design	ANZECC 2000/ ANZG 2018 FW 95%	Environmental protection license (EPL) ¹	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean	Samples/ locations	Minimum	Maximum	Mean
Physical / Alkalinity / Ions	Total Dissolved Solids (TDS)	mg/L	35,000			13 / 13	11,000	20,400	14,954	8 / 6	6,850	12,000	9,539	24 / 13	283	16,200	9,091
	Electrical Conductivity @ 25C (lab)	µS/cm			7,000	13 / 13	15,000	24,600	20,862	8 / 6	11,000	20,000	15,150	24 / 13	452	23,600	13,657
	pH (Field)	-	<5.5		6.5 - 8.0	9 / 13	6.50	7.32	6.99	4 / 6	6.11	7.19	6.78	6 / 13	6.45	7.49	6.82
	Redox Potential (Field)	mV				9 / 13	-34.60	101.30	19.24	4 / 6	35.30	157.60	89.23	6 / 13	-157.50	116.80	-52.57
	Chloride	mg/L	6,000			23 / 13	4,650	9,010	6,758	11 / 6	2,790	7,200	4,872	27 / 13	93	7,260	4,303
	Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1,000			23 / 13	22	1,110	578	11 / 6	210	918	523	27 / 13	31	1,490	437
	Bicarbonate Alkalinity as CaCO3	µg/L				23 / 13	500,000	1,220,000	929,000	11 / 6	643,000	1,200,000	1,024,636	27 / 13	40,000	1,350,000	912,852
Nutrients	Nitrogen (Total)	µg/L			1,720	23 / 13	<500	28,300	4,117	14 / 6	400	16,100	2,746	26 / 13	700	6,900	3,123
	Phosphorus	µg/L			140	23 / 13	<30	16,200	1,416	12 / 6	<10	7,330	696	25 / 13	<10	1,230	165
	Ammonia as N	µg/L		900	900	23 / 13	<50	4,910	959	14 / 6	90	3,800	1,248	27 / 13	30	4,140	2,170
	Nitrate (as NO3-N)	µg/L				23 / 13	<10	560	68	14 / 6	<10	70	26	27 / 13	<10	3,110	345
Metals (dissolved)	Aluminium	µg/L		55	80	13 / 13	<10	310	38	5 / 6	<10	<10	10	24 / 13	<10	<50	13
	Chromium (III+VI)	µg/L		1	1	25 / 13	<1	19	2	11 / 6	<1	<1	1	25 / 13	<1	1	1
	Chromium (hexavalent)	µg/L		1	1	8 / 13	<10	<1000	134	2 / 6	<10	<10	10	2 / 13	<10	<10	10
	Cobalt	µg/L				13 / 13	<1	7	3	7 / 6	<1	1,020	149	24 / 13	<1	47	7
	Copper	µg/L		1.4	1.4	25 / 13	<1	9	2	10 / 6	<1	8	2	25 / 13	<1	10	2
	Iron	µg/L				13 / 13	182	1,950	1,097	7 / 6	45	5,450	1,037	24 / 13	<1	2,600	407
	Manganese	µg/L		1,900		13 / 13	<50	3,040	412	10 / 6	<50	900	295	25 / 13	<50	4,580	1,547
	Zinc	µg/L		8	15	25 / 13	<5	27	10	10 / 6	<5	59	16	25 / 13	<5	24	7
TPH	C6 - C9	µg/L				25 / 13	<20	<20	20	16 / 6	<20	40	23	31 / 13	<20	80	29
	C10 - C36 (Sum of total)	µg/L				22 / 13	<50	<100	57	14 / 6	<50	880	174	30 / 13	<50	840	125
PFAS	Perfluorooctane-sulfonic acid (PFOS) ²	µg/L		0.00023		17 / 13	<0.0003	<0.01	0.00	14 / 6	<0.0001	<0.01	0.01	31 / 13	<0.0001	<0.05	0.01
	Perfluorooctanoic acid (PFOA) ²	µg/L		19		17 / 13	<0.0005	<0.01	0.004	14 / 6	<0.0008	<0.01	0.007	31 / 13	<0.0008	<0.05	0.010
	Sum (PFHxS + PFOS)	µg/L				17 / 13	<0.0003	0.107	0.010	14 / 6	<0.0008	<0.01	0.006	31 / 13	<0.0008	<0.05	0.010

1. EPL No. 21672, amended 9 February 2023
2. Adjusted to 99% species protection criteria due to potential for bioaccumulation



Annexure G Environmental Representative Endorsement



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26 September 2022

Ref: 201209(b)_CNVMP&CSWMP_R1

Dear Hugh

**RE: Endorsement of Construction Noise and Vibration and Soil and Water
Management Sub-Plans - Sydney Metro Western Sydney Airport Station Boxes and
Tunnelling Works**

Thank you for providing the following documents for Environmental Representative (ER)
review and approval prior to commencement of Construction, as required by Conditions
of Approval C1, C5/6 and C13 of the Sydney Metro Western Sydney Airport project (SSI
10051 July 23, 2021):

- NSW (Off-airport) Construction Noise and Vibration Management Sub-plan -
Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works,
Revision 1 of 23/09/2022 (Doc No. SMWSASBT-CPG-1NL-NL000-NV-PLN-000001)
- NSW (Off-Airport) Soil and Water Management Sub-Plan - Sydney Metro Western
Sydney Airport Station Boxes and Tunnelling Works, Revision 1 of 21/09/2022
(SMWSASBT-CPG-1NL-NL000-WA-PLN-000002)

The Construction Noise and Vibration Management Sub-Plan and the Soil and Water
Management Sub-Plan contain the Construction Monitoring Program – Noise and
Vibration, and Construction Monitoring Program – Surface Water Quality and
Construction Monitoring Program – Groundwater, respectively. Therefore, those
Construction Monitoring Programs form part of this review and endorsement.

It is noted that:

- Previous versions of the documents have been reviewed and updated following
comments from the ER
- Sydney Metro have also reviewed and commented on the relevant documents
- Evidence of consultation records has been provided to the ER
- Following the above reviews, the documents are considered to contain
information and consultation required

Leaders in Environmental Consulting

1



Healthy Buildings International Pty Ltd

Accordingly, as an approved ER for the Sydney Metro Western Sydney Airport project, I now consider the subject CEMP Sub-Plans and Construction Monitoring Programs consistent with the requirements in or under the Infrastructure Approval and the undertakings made in the documents listed in Condition A1.

Yours sincerely



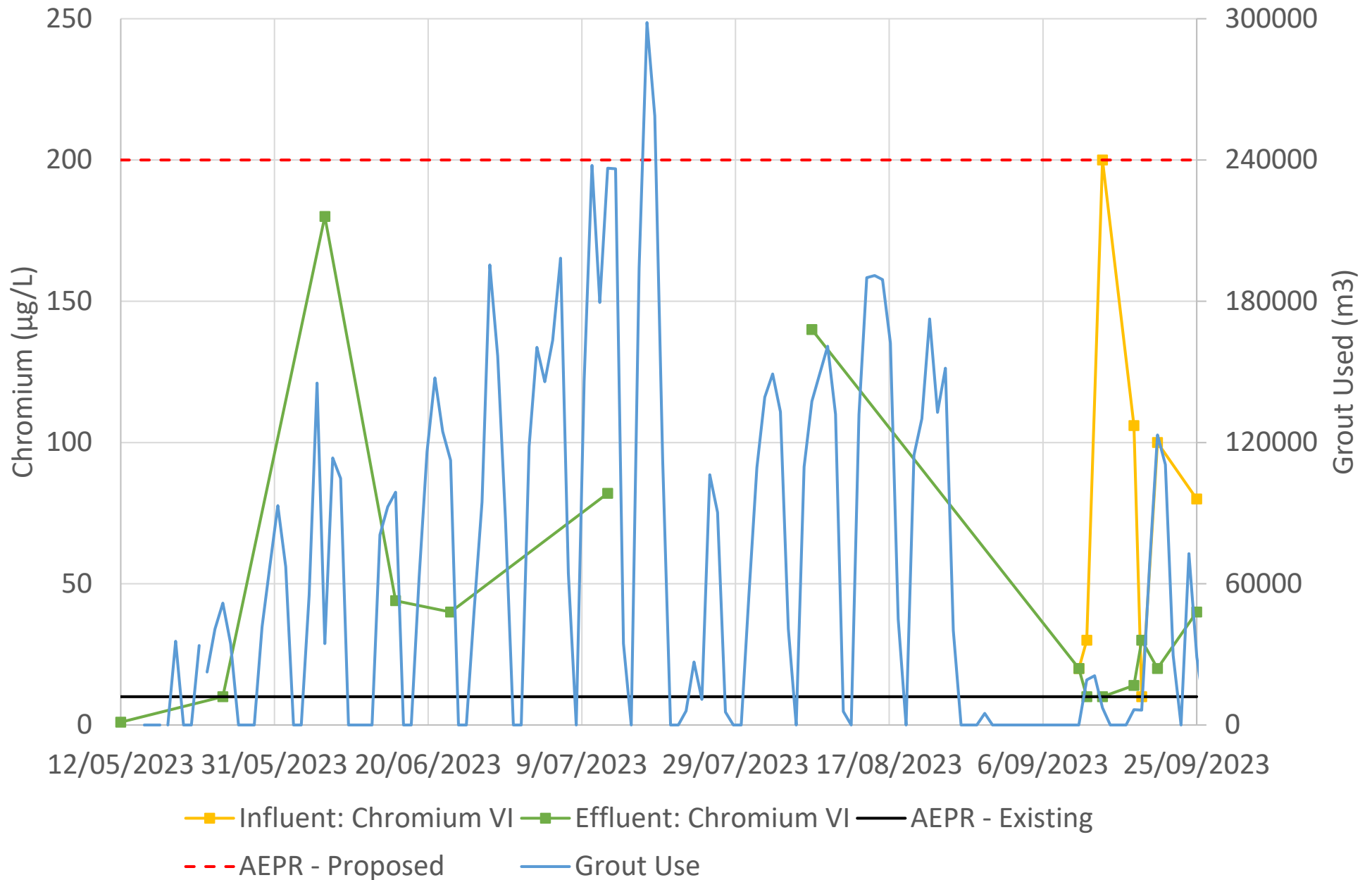
Environmental Representative

Environmental Representative

Annexure E Influent and effluent concentrations over time



ABP - Chromium in Feedwater / Effluent Vs Grout Use



ABP - Zinc in Feedwater / Effluent Vs Grout Use

