



Longhorn Pipeline System
2023 Annual System Integrity Plan
Self-Audit Report

December 16, 2024



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1.0. Introduction

This *Annual System Integrity Plan Self-Audit Report* documents the 2023 annual self-audit of the Magellan Midstream Partners, L.P. (Magellan) Longhorn Pipeline System (LPS) System Integrity Plan (SIP). As detailed in Section 1.3, the SIP specifies various requirements and protocols incumbent upon Magellan in the management and operation of the LPS.

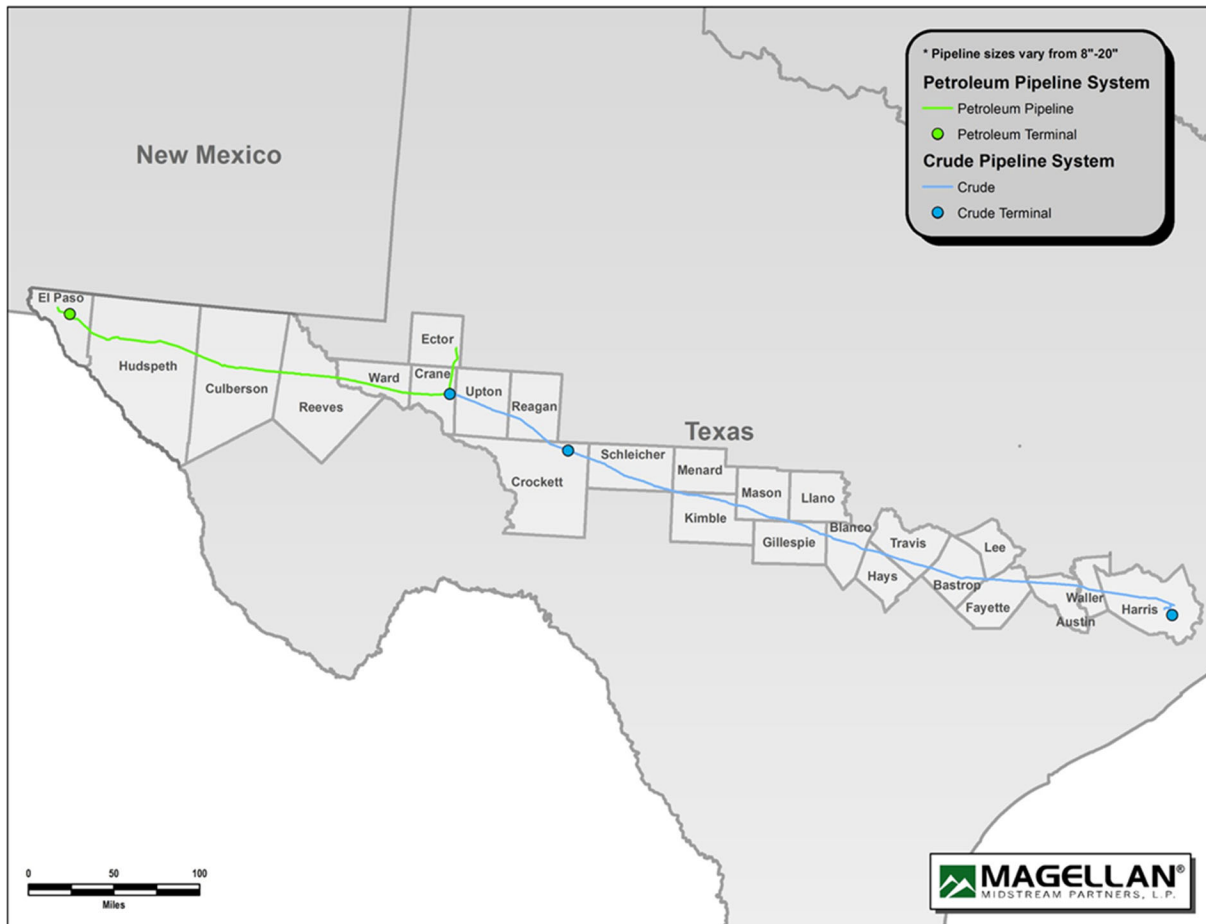
Appendix A provides a list of the primary acronyms used in this report.

1.1. Pipeline Background

The process that ultimately resulted in the operation of the current LPS began in the mid-1990s, when Longhorn Partners Pipeline, LP acquired the original, idled pipeline. Following several investigations and activities, the LPS was first returned to service in January 2005. Magellan took over operations in 2005 and ownership of the LPS in August 2009. Refer to Section 1.2 for additional details.

Originally, the LPS transported refined products westward across almost the entire breadth of Texas, from East Houston/Pasadena (in Harris County) to El Paso. Currently, refined products continue to flow westward from Odessa (in Ector County), first travelling south through Crane and then on to El Paso. The remainder of the LPS had its flow reversed (eastward, from Crane to Pasadena) and was converted to West Texas Intermediate crude oil service. Figure 1 shows the overall current product service for the LPS.

Figure 1: Longhorn Pipeline System Operational Network



1.2. Pipeline History

Table 1 summarizes the history of the LPS.

Table 1: History of the Longhorn Pipeline System

Year	Events
1949–1995	Exxon constructed the original, predecessor 18"/20" pipeline to transport crude oil from Crane, Texas to Baytown, Texas and operated and maintained it until the pipeline was idled and purged with nitrogen.
October 21, 1997	Longhorn Partners Pipeline, LP acquired the existing (idled) pipeline from Exxon, with the intent to place it back into service.
April 1998	National Environmental Policy Act (NEPA) lawsuit filed in federal court, Austin, Texas.
1998–1999	Cleaning and refurbishment of the existing pipeline. Construction of new pump stations (Galena Park, Satsuma, Cedar Valley, Kimble County, Crane, and El Paso). Construction of El Paso Terminal. Construction of pipeline extensions: <ul style="list-style-type: none"> • 18" Crane to El Paso • 8" Crane to Odessa • 20" GATX to Tie-In • 8" and 12" pipelines from El Paso Terminal to tie-ins with other systems
March 1999	NEPA Settlement Agreement requires an environmental assessment, which ultimately leads to issuance of the <i>Longhorn Mitigation Plan</i> .
November 2000	Finding of No Significant Impact issued and <i>Longhorn Mitigation Plan</i> published.
2001–2004	Pre-start-up Mitigation Commitment activities performed.
January 27, 2005	Official start-up date for the LPS.
August 2006	Flying J acquires Longhorn Partners Pipeline, LP.
August 27, 2009	Magellan purchases the LPS from Flying J.
March 2013	Flow direction of eastern two-thirds of LPS reversed, with product service in that portion of the line changed to crude oil (flows from Crane, Texas to East Houston).
Sept 2023	ONEOK purchased Magellan

1.3. System Integrity Plan

The Longhorn Partners Pipeline, LP's 1997 project to return the LPS to service was opposed by various groups, resulting in a lawsuit and eventual settlement in March 1999. Longhorn Partners Pipeline, LP agreed to implement the *Longhorn Mitigation Plan* as part of the original NEPA Settlement Agreement. Following two early revisions, the *Longhorn Mitigation Plan* includes 40 Mitigation Commitment tasks that address various integrity concerns on the LPS, both before and after start-up. The *Longhorn Mitigation Plan* also committed Longhorn Partners Pipeline, LP to implement an SIP, which is now Magellan's responsibility. Magellan's SIP includes three main elements:

1. Management Commitment tasks (14 total), addressing various elements of the Integrity Management Program (IMP) for the pipeline system, including a commitment to conduct an annual self-audit of the Magellan SIP for the LPS
2. Magellan SIP process elements (15 total), addressing various operational management processes for the LPS
3. An Operational Reliability Assessment (ORA), providing an independent technical analysis of various integrity threats on the pipeline system

The Management Commitment tasks (except for IMP elements as noted below) and the ORA reports are addressed in separate reporting processes and are not included as part of this SIP self-audit. However, certain aspects of these (such as ORA feedback, as discussed in Section 5.6) are intertwined with the overall management of the SIP.

Magellan's SIP is designed to be consistent with the company's comprehensive Pipeline Safety Management System. The SIP was first issued in 2004 and has been updated and has been continually reviewed and updated since that time.

- The IMP elements included in the original 14 Management Commitment tasks—as well as the original 12 LPS SIP elements—have been consolidated in the 15 process elements in the Magellan SIP.
- The Magellan SIP contains a requirement for a formal annual review, validation, and updates, which also ensures compliance with current regulatory requirements. Process performance measurement, assessment, and continual improvement objectives are incorporated within the SIP.
- In 2015, the American Petroleum Institute (API) published API Recommended Practice 1173, *Pipeline Safety Management Systems* (API 1173). API 1173 provides operators with a framework to 1) identify and manage risk, 2) promote a learning environment, and 3) continually improve pipeline safety and integrity. Magellan's SIP is aligned with the objectives of API 1173 and Magellan has formally joined other pipeline operators in committing to implementation of API 1173.

In this report, the 15 LPS SIP process elements are referred to sequentially as PE1 through PE15. Section 5.0 presents the findings for these 15 process elements. Section 6.0 outlines the considerations resulting from this year's self-audit.

2.0. Self-Audit Methodology

Magellan's self-audit methodology is based on contracting a team of qualified outside consultants (herein referred to as the "auditors" or the "audit team") to conduct a review of the *Longhorn Mitigation Plan*, the SIP, and various associated documents and to interview relevant Magellan personnel. From this information, the auditors gain an understanding of the self-audit requirements and how Magellan has performed in relationship to those requirements—and all applicable regulatory requirements—during the audited year.

- Documents reviewed include policies and procedures; work activity reports; agreements with third parties; performance-tracking metrics; and other relevant compliance documents.
- Interviews included personnel from Magellan facilities in El Paso, Crane, Austin, and Tulsa, and included personnel from both field operations and the corporate office.
- Appendix B provides a list of the documents reviewed and the personnel interviewed for this year's audit.

The 2023 self-audit team was composed of two representatives from Integrity Solutions® Ltd, both of whom are skilled integrity management and regulatory compliance auditors with over 50 years of combined experience in the industry. Their statements of qualifications are presented in Appendix C. Using their best professional judgment and experience, the auditors developed the opinions and findings that are documented in this report.

Prior to finalizing this report, the auditors reviewed all interim findings with Magellan to ensure that the information documented herein is factually correct and considers all appropriate information; however, the findings and conclusions stated in this report are the independent work of the audit team based on requirements defined in the *Longhorn Mitigation Plan* and the Magellan SIP, as well as on the applicable pipeline safety regulations of the Texas Railroad Commission and the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA).

3.0. Significant Developments for 2023

During 2023, Magellan was purchased by ONEOK with the sale finalized in September, but Magellan continued to implement system integrity activities as required by PHMSA pipeline safety regulations, the *Longhorn Mitigation Plan*, and the SIP. Operations and Operations personnel were not affected by the merger, but a few additional personal protective equipment (PPE) requirements were initiated. In addition, a new leak detection cable was selected to replace the existing leak cables inside of the Edwards Aquifer. See Section 5.6 for more details.

Proposed wording:

In September 2023, Magellan was purchased by ONEOK. Magellan Pipeline Company is still the PHMSA operator of record and continues to implement system integrity activities as required by PHMSA pipeline safety regulations, the *Longhorn Mitigation Plan*, and the SIP. Operations and Operations personnel were not affected by the merger, but a few additional personal protective equipment (PPE) requirements were initiated. In addition, a new leak detection cable was selected to replace the existing leak cables inside of the Edwards Aquifer. See Section 5.6 for more details.

4.0. Summary of Findings

As described in Section 1.3, the *Longhorn Mitigation Plan* requires an annual self-audit of Magellan's LPS SIP. The *Longhorn Mitigation Plan* specifically requires that the self-audit address five core areas of system integrity, and their 15 supporting process elements, of Magellan's SIP.

4.1. Synopsis of Integrity Issues

The 2023 audit, conducted in May and August 2024, reviewed the activities and programs used to manage risk. These activities and programs are mature, functioning as designed, and are well understood by employees. The activities and programs used to manage risk on the LPS are addressed individually throughout Section 5.0.

In 2014, two minor, non-PHMSA-reportable release incidents occurred resulting from faulty valve stem coating applied during the manufacturing process. As a result, Magellan initiated a replacement program for all similar valve stems. Replacements are evaluated based on the following criteria:

1. Risk prioritization of a potential leak
2. Valve locations in relation to high consequence areas (HCAs)
3. Potential severity of valve stem leak

Magellan did not replace any valve stems in 2023. Until all the defective valve stems have been replaced, LPS personnel continue to monitor and inspect each valve and associated secondary containment.

Magellan issued 35 lessons learned bulletins in 2023. The lessons learned were related to pipeline operations on non-LPS assets. LPS personnel conducted 10 investigation events during 2023. During each event, the LHP is shut down until an investigation occurs and it has been determined the pipeline is safe to restart.

- Two of the incidents resulted from landowners reporting either gas / crude oil smell or ROW activity.
- The third event resulted from a drunk driver following a truck driver into the El Paso tank farm and striking facility piping.
- The final event is related to a leak along the Magellan ROW. After careful investigation and cooperation from other pipeline operators inside of the ROW, the team determined the leak belonged to another pipeline operator.

Only one formal incident investigation occurred along the LHP in 2023. A third-party contractor was excavating four Magellan pipelines during a third-party pipeline relocation project and inadvertently struck Magellan's 8" Flush pipeline. While both companies' damage prevention operators were present, Magellan's line incurred a longitudinal 27-inch scrape along the top of the line. The incident investigation determined that SIP Procedure 7.11-ADM-001, *Excavation Safety*, was not followed. Magellan's damage prevention operator's excavation qualifications were suspended, and retraining was required. The third-party's excavator was later terminated due to failing the post-incident drug test.

Table 2 summarizes the 2023 incident investigation classifications.

Table 2: 2023 Incident Investigations and Accidents

Cause	Classification					
	PHMSA Reportable	Hazardous Near Misses	Human Error	Equipment Failure	One-Call Violations	ROW Near Misses
Employee	0	0	1	0	0	0
Suspected Leaks	0	0	0	0	0	0
Equipment Failure	0	0	0	0	0	0

4.2. Improved IMP Elements and Activities

In years past, individual training plans (ITPs) were created for personnel and manually tracked in an Excel spreadsheet. During 2023, Magellan began tracking ITPs within its learning management system (LMS). Operations personnel indicated that ITP assignment and progress tracking became increasingly easier using the LMS. In addition, 22 LHP technicians were enrolled and completed the new electrical qualified individual training program in 2023.

5.0. Process Element Findings

The 15 process elements described in the *Longhorn Mitigation Plan* are addressed in the following subsections.

5.1. PE1: Magellan Commitment

The *Longhorn Mitigation Plan* defines the integrity assurance focus areas and specific commitments planned for the year. Progress against these commitments is monitored on a regular basis. The SIP Council (the "Council") is the approval body for significant planned improvements to the LPS, including the *Longhorn Mitigation Plan* commitments. The Council meets twice per year to review progress against the planned improvements.

The SIP is the foundation for Magellan's comprehensive Pipeline Safety Management System, which applies to all personnel and assets. The SIP was developed to build a culture that strives for continuous pipeline safety and integrity improvement. The SIP aligns with API 1173 and contains 15 process elements designed to support the Council's mission for the SIP. The LPS has Element Owners for each of the 15 SIP process elements who are responsible for monitoring performance against the element requirements and suggesting improvements to the requirements when needed.

Each year, the Council develops specific safety, environmental, and operational performance goals. These goals and objectives are documented in quarterly Operational Performance Reports. Magellan's commitment stems from the development of the goals, continuous improvement, and structured program governance, and thorough evaluation of program key performance indicators (KPIs), to determine SIP effectiveness. These goals include specific operational, environmental, and safety targets (e.g., pipeline volumes, operations and maintenance [O&M] task completions, abnormal operating conditions [AOCs], spill volumes, U.S. Occupational Safety and Health Administration [OSHA]-recordable injury rates, etc.). Performance against these targets is measured and documented.

The ORA provides Magellan with an annual technical assessment of the actual effectiveness of the overall LPS SIP. The 2023 ORA (covering 2022 operations) was provided to Magellan by the PHMSA-approved, independent, third-party ORA contractor, Kiefner and Associates, Inc. Magellan stated that the 2022 ORA report has been submitted to PHMSA.

During the interviews, management's continued commitment remained a common theme. In addition to the continued financial support that ensures asset integrity, the employees interviewed stated that management supports them through empowerment by allowing them to run and manage monthly safety engagement meetings (SEMs). Numerous best practices utilized across the LPS are adopted across non-LPS assets, providing proof that practices are deeply embedded and supported by management. Instead of internally performing the Annual SIP Self-Audit, management is dedicated to hiring a third party for an unbiased review of the program's effectiveness.

5.2. PE2: Training

A comprehensive training matrix exists for all field/operational safety-critical positions in the company. The matrix includes safety-critical roles and the training requirements for each of those positions. Individual training plans (ITPs) for all LPS field personnel are managed in Magellan's Learning Management System (LMS). Completion of all training requirements is managed by the individual's supervisor. During the field interviews, managers and technicians indicated that the LMS facilitated tracking, updating, and viewing training status.

To help technicians manage electrical hazards safely, Magellan implemented supplemental training for a new electrical training program. In 2023, 22 LHP technicians enrolled in and completed the Electrical Qualified Individual Training Program. The program was designed to help technicians understand the fundamentals of electrical systems, codes and standards (OSHA, NFPA 70E, NEC, etc.), lockout/tagout, PPE, arc flash safety and finally testing and troubleshooting. The following is a breakdown by location:

- 4 technicians in the El Paso Area
- 6 Technicians in the Odessa area
- 4 technicians in the Crane area
- 8 technicians in the Austin area

In addition to personal ITPs, LPS employees are required to train and qualify on covered tasks according to Magellan's operator qualification (OQ) program. If covered tasks are performed incorrectly, the safety or integrity of the pipeline can be compromised. Prior to qualifying for a covered task, employees need to be trained on the task, trained on the local operating procedure, need to be able to react and respond appropriately to AOCs, pass a written exam and/or, practical evaluation that demonstrate the necessary skills and abilities to perform the work unsupervised. Covered tasks are assigned to LPS personnel based on position and operational need. Individual OQ task assignments are reviewed annually, and employee qualification records are documented and managed within ISNetworld.

While most LPS operational areas are staffed with experienced employees well-versed in both the LPS and the *Longhorn Mitigation Plan*, areas within the shale plays continue to face higher turnover rates. In 2023, five new employees were hired across the LPS. Supervisory personnel acknowledged the challenges posed by employee turnover and recognized the need for enhanced efforts to ensure that new hires are thoroughly trained and fully understand their roles and responsibilities in meeting the requirements of the *Longhorn Mitigation Plan*.

New Operations employees are required to participate in Magellan's New Employee Orientation (NEO), a comprehensive three-week program designed to prepare field personnel for their roles. During the first week, employees attend sessions in Tulsa, followed by a second week in the field for site-specific training. The third week concludes back in Tulsa, focusing on further integration and training.

New employees are assigned a senior mentor who provides specialized guidance related to the *Longhorn Mitigation Plan* and local operations. Key stakeholders responsible for various aspects of the *Longhorn Mitigation Plan* actively participate in NEO, delivering presentations and sharing information essential for the program's implementation. Additionally, new Controllers undergo an extended six-month training period. During this time, they work alongside a qualified Controller, gaining hands-on experience to ensure that they can safely and effectively react and respond to abnormal and emergency operational conditions.

5.3. PE3: Contractor Management

Magellan engages contractors for various operational activities within the LPS, including inspection services, right-of-way (ROW) management, valve repairs, line locating, environmental assessments, and detailed engineering work. All contractors are selected through Magellan's Contracting Group, with several key factors influencing the selection process, such as safety performance, operational experience, cost, and previous work history.

Contractors with high safety performance concerns—such as elevated experience modification rates (EMR) or total recordable incident rates (TRIR)—or those with a history of fatalities are either disqualified from consideration or subjected to additional safety mitigation measures.

Before engagement, all contractors must submit their drug and alcohol policies, safety programs, OSHA ratings (including total incidence rate [TIR], incident rate [IR], and EMR), and employee qualifications for covered tasks through ISNetworld. This centralized platform enables a comprehensive evaluation of each contractor's safety record and ensures the appropriate qualifications of individual contractor employees. It is mandatory for all LPS Project Managers, Area Supervisors, and personnel overseeing covered tasks to verify contractor qualifications prior to the execution of any such tasks. In 2023, one contractor's qualifications were revoked due to an incident involving pipeline damage during excavation.

Additionally, contractors must complete an Authorization to Work (ATW) form before commencing work each day. This form helps identify potential hazards, propose mitigation measures, and outline any additional permits required for the day's activities. All personnel involved in the project are required to review and sign the ATW, confirming their understanding of the identified hazards and corresponding preventive actions.

5.4. PE4: Project Management

Magellan's project management process involves a structured approach to ensure that pipeline projects are completed safely, on time, within budget, and in compliance with all regulations and standards. The process follows several key phases, each designed to manage risks, optimize resources, and ensure alignment with stakeholders. The following are a few of the key elements:

- Effective communication
- Regulatory compliance
- Risk management

Magellan utilizes contractors for all major construction or significant repair work on the LPS. Smaller projects may be managed by LPS regional staff; however, major projects are managed by Magellan's Technical Services Group. During 2023, Magellan completed a number of small local projects, while the larger projects included two new pump stations at El Paso and Crane and a new Tank No. 25 in El Paso.

For the majority of pipeline modifications and additions within the LPS, standard engineering design packages are utilized. In instances where standard designs are not applicable, designs are developed based on established industry practices and standards.

If any changes are made to project-related standards, a Project Change Document is created and formally approved before the execution of any work activity. Similarly, if there are changes in key project parameters—such as cost or schedule—the adjustments are documented through a formal Project Change Document to ensure proper review and approval processes are followed.

As part of the Management of Change (MOC) process, the LPS Regional Operations team reviews design packages and provides input as needed. This collaborative approach allows for potential design modifications that better accommodate operational needs or enhance safety.

5.5. PE5: Safety Management

LPS Regional Operations have established designated safety committees that oversee the facilitation of monthly safety meetings. These meetings, known as Safety and Environmental Meetings (SEMs), are developed by Magellan's Environmental, Health, Safety, and Security (EHS&S) Group and are led by Operations personnel. This structure fosters greater ownership of the meeting content, allowing for the discussion of local safety issues and concerns specific to each region.

The Last-Minute Risk Assessment (LMRA) program, implemented in 2021, has been fully embraced by Operations personnel. Interviews indicate unanimous belief that the LMRA program has enhanced employee participation and increased knowledge-sharing across operational areas, contributing to the program's overall success. In 2024, a new program called "Take 5" will be rolled out. Take 5 is designed to encourage personnel to pause before beginning a task, take 5 minutes to reevaluate the task's risks, and ensure that the necessary mitigative measures are in place. Take 5 evaluations should also occur after one of the following (or similar) events:

- When an unexpected hazard occurs
- When there is a change or deviation from the previous job plan
- When the task changes
- After a break and before resuming work
- When something does not look or feel right

Collaboration between LPS Operations groups and contractors is a cornerstone of the safety program. Local Operations personnel work closely with contractors to ensure that site-specific safety concerns are addressed, and that each contractor develops an approved safety plan. This partnership extends to defining job scopes and applying the appropriate Job Safety Analysis (JSA) for each project, ensuring that both parties are aligned on safety measures and mitigation strategies.

Each LPS operational area follows stringent ATW processes for high-risk tasks, such as confined space entry, excavation, hot work, lockout/tagout (LOTO), and working at heights. These processes rely on a combination of Job Hazard Analyses (JHAs) and daily ATW permits. JHAs are used to break down the steps of each task, identify associated hazards, and outline the mitigation measures required to ensure a safe work environment.

Facility Safety Reviews (FSRs) are conducted annually at all staffed locations and biannually at unstaffed sites, led by local operational leadership. These reviews assess the safety and security of each facility, ensuring compliance with minimum safety and inspection standards. Of the nine FSRs conducted in 2023, no major findings were reported during these assessments; however, the Cedar Valley FSR indicated a pipe was not contacting the support structure and the situation was corrected while onsite.

The LPS fosters a strong safety culture, empowering employees to manage, inspect, audit, and stop any work if safety concerns arise. This was consistently demonstrated in employee interviews, where all levels of staff expressed a commitment to achieving the goal of zero accidents or releases. Furthermore, employees feel confident in exercising their stop-work authority, indicating a deeply ingrained safety culture supported by management.

In conclusion, the safety programs within LPS Regional Operations are highly effective, as evidenced by strong employee engagement in safety practices, regular audits and inspections, and a robust culture of safety that permeates all levels of the organization.

5.6. PE6: Environmental Protection

Environmental expectations for the LPS are clearly outlined in the Site Inspection Procedures, which address all regulatory requirements concerning water, air, soil, and waste management, as mandated by federal and state laws. In certain areas of the LPS, particularly around the Edwards Aquifer, enhanced environmental protections are enforced, exceeding standard regulatory obligations. Each employee interviewed demonstrated a solid understanding of these site-specific requirements and the special considerations mandated by the *Longhorn Mitigation Plan*.

To support these operations, LPS teams are assisted by corporate environmental subject-matter experts (SMEs). These SMEs play a crucial role in ensuring regulatory compliance by conducting comprehensive compliance reviews, providing targeted training to both Operations and Technical Services personnel on environmental standards, and ensuring the timely completion of all tasks within the Compliance Management System (CMS).

Magellan regularly receives suspected-release reports, which often originate from other pipeline operators or the public. Despite the high number of false-positive reports, LPS immediately halts operations upon receiving such notices and dispatches personnel to ensure safety and confirm responsibility.

Environmental compliance tasks are meticulously tracked through the CMS. Responsible personnel receive automated reminders 30 days and 5 days before task due dates. These tasks are consistently executed on schedule, ensuring thorough and compliant operations.

The LPS utilizes the Pipeline Manager (PLM) advanced leak detection system, which is monitored by the control center. PLM polls LPS status every three seconds, evaluating and comparing volumes over short timeframes (5, 10, 30 minutes) and for slower leaks over extended periods (6, 12, 24 hours). Monthly evaluations of PLM alarms and system performance indicators are conducted and benchmarked against industry-standard key performance indicators (KPIs).

In 2020 Magellan began research and testing to determine if alternative leak detection technology is available and might be an improvement versus the leak detection cables currently used. In 2022, the leak detection cables began exhibiting a number of failures that required numerous cable section replacements. As part of addressing the leak detection cable issues, a new procedure was created. This procedure provides guidance for monthly, quarterly, and semiannual inspections, as well as alarm response activities and an increase in local monitoring. Additionally, Magellan has since found a new and more reliable leak detection cable, manufactured by Naftosense. The entire 8-mile segment of the LPS that uses leak detection cables will have those cables replaced with the Naftosense cables over the next 2 to 5 years.

In 2023, Magellan ran Pure Technologies' SmartBall[®] in-line inspection (ILI) tool on the Cedar Valley to Bastrop segment of the LPS—encompassing the entire segment that uses leak detection cables—to assist in leak monitoring. This was a successful run and no leaks were found. Since SmartBall[®] is no longer in business, Magellan will continue to run equivalent tool technology in the LPS on a quarterly basis until all the new leak detection cables are installed.

Magellan remains committed to achieving zero environmental incidents. In 2023, the LPS had zero PHMSA-reportable releases. Table 3 outlines LPS release volumes since 2019. The data provides evidence of LPS employee efforts to achieve zero releases.

Table 3: 2019–2023 Product Release Data

Year	No. of Releases	PHMSA Reportable Incidents	Volume (bbl)
2019	1	0	0.07
2020	2	0	0.47
2021	1	0	0.50
2022	1	0	0.10
2023	0	0	0.00

5.7. PE7: Asset Integrity

Magellan views asset integrity as a fundamental component of its overall risk management strategy and IMP. Responsibility for managing asset integrity within the LPS is distributed across multiple groups, with primary oversight provided by the Pipeline Integrity Group and the Facility Integrity Group, located at Magellan's corporate office in Tulsa, Oklahoma. The pipeline IMP is fully compliant with all regulatory requirements, while non-pipeline assets—such as storage tanks, facility piping, and associated equipment—are managed under the facility integrity management program (FIMP), which is an integral part of Magellan's broader IMP framework.

Magellan employs an annual review process to identify and assess new potential threats to both the pipeline and associated facilities. This proactive approach ensures that emerging risks are continuously evaluated and managed effectively.

The organization maintains a comprehensive pipeline data repository that supports threat evaluation activities. This data is managed across various teams and consolidated within the Magellan ArcGIS Portal System (MAPS), an extension of the company's ArcGIS platform. MAPS data is routinely used in investigative events, Code Red events (as outlined in Section 5.12), and emergency drills. Magellan continues to enhance this system by identifying and integrating additional data layers and datasets for future use. Data integration is a vital part of Magellan's IMP; therefore, keeping the MAPS database updated with new and accurate data is integral to the program. Looking for overlapping and/or interactive threats during review of assessment results and during digs is another way Magellan applies the data integration process.

Magellan regularly utilizes smart ILI tools, in alignment with both the *Longhorn Mitigation Plan* and federal and state pipeline integrity regulations. In addition to completing assessments within the interval schedule based on regulations and internal reviews, Magellan runs deformation inspection (DEF) tools on a 3-year interval as part of the *Longhorn Mitigation Plan*. These tools help Magellan to continue to look for any signs of third-party damage threat on the LPS.

Parts of the LPS were constructed using electric-fusion-welded (EFW) pipe, a material with recognized potential manufacturing vulnerabilities. Magellan leverages both internal company data and broader industry data to detect trends that may pose a threat to the LPS, particularly in locations with EFW pipe.

As part of its mitigation measures, Magellan employs tools capable of detecting threats to longitudinal seams and hard spots based on frequency requirements established by the ORA. No hard spot tools were used in 2023.

As previously mentioned, DEF tools must be run every three years as part of Mitigation Commitment 12A. In 2023, Magellan conducted two combined magnetic flux leakage (MFL) and DEF assessments, as well as nine DEF-only assessments. Notably, no pressure reductions were required, and no third-party damage (TPD) repairs were needed based on these evaluations. Magellan completed one verification dig of a dent on the Eckert to Cedar Valley 18" pipeline in 2023. A small, 0.9% depth dent was repaired with a sleeve.

Table 4 summarizes ILI tool use from 2014 through 2023, with the number of digs completed each year based on the results of completed ILIs. Table 5 provides the list of digs completed in 2023 by line segment name and the associated ILI year.

Table 4: Historical Tool Use and Completed Repairs*

Event	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Smart ILI ToolRuns ⁽¹⁾	2 (MFL and DEF), 9 DEF only	3 (MFL and DEF), 1 DEF only	3 (MFL and DEF)	17 (UCD & MFL for 8 segments; 1 MFL-only segment)	6 (UCD & MFL)	12	7	2 (SMFL & MFL)	14 (TFI)	4 (SMFL & MFL)
Digs	6	38	196	249	31	19	0	0	0	0

1. Tool runs completed prior to 2018 had associated repairs that were completed prior to 2018.

Table 5: 2023 Digs by Line Segment

Line Segment	ILI Tool	ILI Year	2023 Digs
Cottonwood to El Paso	MFL	2022	5
Eckert to Cedar Valley	DEF	2023	1
Cedar Valley to Bastrop	DEF	2023	1

Magellan completed 11 ILI assessments in 2023. Five repairs from the 2022 runs were completed in 2023, but two digs (with repairs as needed) are scheduled for 2024. All crack or crack-like anomalies are evaluated per the SIP and are approved for repair with Type B sleeves. In addition to ILI assessments, Magellan performs hydrotests on certain lines; however, in 2023, no hydrotests were performed on the LPS.

The *Longhorn 2012 Environmental Assessment* requires Magellan to conduct nondestructive or destructive strength tests for 50% of all annual pipe excavations associated with ILI anomaly evaluations or remediation where material documentation does not exist. In 2023, seven digs were completed, of which two met the criteria for material testing. One of those two excavated locations had nondestructive, positive-material-identification performed, meeting the criteria for material testing.

The *Longhorn Mitigation Plan* risk management commitment is to maintain pipeline-related failure rates at or below a probability level of 1 in 10,000 (0.0001) per mile year. The scenario-based risk-mitigation analysis (SBRMA) for the 2023 operating year was performed in 2024 and identified no areas along the pipeline exceeding the failure rate commitment.

The LPS had eight water crossings surveyed in 2023. The water crossings surveyed included Antelope Gulch, Cottonwood Creek, Cummins Creek, Est Mill Creek, Pin Oak Creek, Piney Creek, and one unnamed creek. Table 6 provides details on each of the waterway crossing inspections performed in 2023:

Table 6: Water Crossing Inspections with Results

Crossing ID	M.P. and Waterway	Priority Level	Priority Level Action Item
10783	65.83 – Unnamed Creek	2	Recommended: Site- Specific Assessment Within 1 Year (02/13/2024)
7728	81.19 – East Mill Creek	2	Recommended: Site- Specific Assessment Within 1 Year (02/13/2024)
923	99.19 – Cummins Creek	4	Reinspect at 5 Years or Before (02/13/2028)
10505	116.18 – Piney Creek	2	Recommended: Site- Specific Assessment Within 1 Year (02/13/2024)
1941	122.50 – Pin Oak Creek	2	Recommended: Site- Specific Assessment Within 1 Year (03/07/2024)
7638	556.89 – Cottonwood Creek	3	Reinspect at 3 Years or Before (02/17/2026)
7735	565.28 – Cottonwood Creek	2	Recommended: Site- Specific Assessment Within 1 Year (02/17/2024)
7799	630.92 – Antelope Gulch	4	Reinspect at 5 Years or Before (02/17/2028)

Since 2020, Magellan has introduced a new FIMP element as part of its broader Asset Integrity Plan. A key component of the FIMP is the completion of detailed Facility Risk Assessments (FRAs). These assessments provide a comprehensive risk analysis and offer recommendations for reinspection intervals by evaluating data from various FIMP elements that safeguard the facility's integrity.

The implementation of the FRA process at all LPS facilities goes beyond the requirements of the *Longhorn Mitigation Plan* and applicable regulations. Notably, the FRAs are conducted regardless of whether the facility is located in an HCA or falls under any specific risk tier for the pipeline and associated systems.

The FRAs targeted several critical areas, including leak detection, mechanical integrity, prime equipment, corrosion control, operating pressure programs, fire safety, and reinspection intervals. All findings from the FRAs are documented within the company's internal database, and any associated action items are tracked to completion. These results serve as valuable inputs for the annual updates and improvements to the FIMP.

FRAs are prioritized based on a risk-based scheduling framework, ensuring that facilities with higher risk profiles are addressed first. Each completed FRA includes a detailed spreadsheet containing the following elements:

- Total FRA score, including risk probability assessment and facility vulnerability assessment (FVA)
- Risk consequence and risk likelihood assessments
- Field and FIMP questionnaires
- Threat analysis
- Compliance and release history
- Abnormal operations and incident history
- Management of change request (MOCR) history
- Action items for follow-up and improvement

In 2023, Magellan completed five FRAs for the LPS. These assessments were carried out at the Cedar Valley, Eckert, Cottonwood, and James River Pump Stations, as well as the Crane Terminal. A detailed summary of the assessments, along with recommendations specific to each location, is provided in Table 7.

Table 7: FRA Inspections

Location	Recommendation
Crane Terminal	<ul style="list-style-type: none"> • Perform UT inspection on the low flow/no flow lines on LACT manifold • Upgrade insulation on Units 3, 4, and 5 seal pots and drain lines • Investigate movement on tank line supports for Tank 51, 53, 55, and 56 • Conduct FRA in 5 years
Cedar Valley Pump Station	<ul style="list-style-type: none"> • Install tubing supports from the drain ports on ROV 4 and ROV 9 • Conduct FRA in 5 years
Cottonwood Pump Station	<ul style="list-style-type: none"> • Change facility from Pump Station to Valve • Conduct limited FRA in 5 years
Eckert Pump Station	<ul style="list-style-type: none"> • Investigate pipe supports extending from sump trap • Replace the undersized pipe supports • Conduct FRA in 5 years
James River Pump Station	<ul style="list-style-type: none"> • Install tubing supports from the drain ports on ROV 2 and ROV 4 • Conduct FRA in 5 years

Emergency flow-restriction devices (EFRDs) are reviewed and analyzed after every pipeline risk analysis. Based on these reviews, Magellan determines whether a new EFRD needs to be installed. In 2023, the LPS did not have any new EFRDs installed.

In 2023, 14 external API 653 inspections were conducted on storage tanks in El Paso and Odessa. The tanks all passed the external inspections and required no remediations prior to the next scheduled 5-year inspections.

Magellan's corrosion control team continues remote monitoring all rectifiers and foreign bonds pipeline bonds. The remote monitoring units (RMUs) allow corrosion personnel to know when a bond has malfunctioned, if current readings are outside normal operating parameters and facilitates current interruption during annual surveys and close-interval surveys (CISs). In 2023, two CISs were conducted over approximately 690 miles of the LPS. The survey extended from East Houston through El Paso. There were numerous locations that did not meet the -0.850 mV instant-off criteria. Corrosion personnel indicated that adjustments to cathodic protection (CP) systems have been made and subsequent testing to meet either the -0.850 mV instant-off or the

100-mV polarization criterion continues. A follow up survey was performed, and all exceptions meet a criterion.

In summary, Magellan has a very robust asset integrity program. The level of detail in documentation and being proactive in inspections and repairs show that Magellan personnel take safety very seriously and treat it as a high priority.

5.8. PE8: Security

Security within the LPS is classified into three key categories: physical asset security, information security, and documentation security. Physical asset security is managed through Site Security Plans (SSPs) and Facility Security Plans (FSPs) that are tailored to specific locations. These plans are reviewed and updated annually to ensure they remain current and effective.

Information and documentation security protocols are also in place, outlining processes designed to protect sensitive information technology assets and security documents from unauthorized access. These protocols ensure that critical data remains secure, mitigating potential cybersecurity risks.

In addition to formal security plans, asset security is enhanced by a heightened presence along the right-of-way (ROW) during regular operations and maintenance (O&M) activities. Any unusual or suspicious activity identified during ROW inspections is immediately reported to the control center for investigation by Operations personnel. To further ensure security, control center personnel monitor key equipment at pumping stations via remote cameras, allowing for real-time surveillance and protection.

Notably, in 2023 no pipeline damage from ROW encroachments were reported, demonstrating the effectiveness of the asset security measures along the pipeline. However, one security breach occurred in 2023. This resulted from a drunk driver following a truck driver through a card-controlled gate at the El Paso tank farm and striking facility piping. There were no injuries, but there was slight damage to the facility piping. The facility was immediately secured, shut down, and ultimately repaired.

5.9. PE9: Operations

LPS personnel have three primary operational objectives: achieving zero health and safety incidents, zero spills, and zero releases. These goals are actively supported by the comprehensive procedures outlined in Magellan's Site Inspection Procedures, which govern the execution of the numerous O&M tasks required by federal and state regulations, as well as the more stringent standards set within the LPS SIP.

During the interviews, Operations personnel articulated a clear understanding of their specific O&M responsibilities, including inspection frequencies and compliance requirements. Each LPS operational area adheres to site-specific work plans and ATW protocols, ensuring that critical tasks—such as working at heights, conducting hot work, confined space entry, and other high-risk activities—are managed with utmost safety. Employees and contractors are required to sign the ATW form prior to the commencement of any work.

Operational procedures, both at the company and site-specific levels, are accessible via Magellan's LiveLink intranet file-sharing system. These procedures are reviewed annually to maintain their relevance and ensure they support safe and effective operations. The effectiveness of these procedures is regularly evaluated through direct task observation or during operator qualification (OQ) practical assessments.

A significant portion of daily operational efforts is dedicated to safeguarding pipeline integrity. Routine activities include ROW inspections, facility inspections, line locating, excavation

monitoring, encroachment management, and basic corrosion control. In 2023, a total of 6,980 tasks were completed, of which 5,079 were preventive maintenance (PM) tasks, with an impressive 95.5% on-time completion rate. Another 228 PM tasks were categorized as "completed overdue," but all were completed before year-end. Table 8 shows the breakdown of all tasks assigned to operations in 2023.

Table 8: Completed Compliance Management System Tasks

Year	PM Tasks	Action Item Tasks	Work Order Tasks
2021	7,591	175	219
2022	7,992	102	81
2023	5,079	84	1,901

One of the most significant risks to the integrity of the LPS is third-party damage, particularly in areas experiencing rapid population growth and development. As sections of the pipeline pass through densely populated and expanding regions, the number of third-party excavations near the pipeline ROW has increased. To mitigate this risk, each geographic region employs Damage Prevention Operators (DPOs) who actively monitor One-Call tickets and oversee ongoing excavation activities near the pipeline.

DPOs perform regular ROW patrols, working in close coordination with pilots who conduct weekly aerial surveys of the ROW in Tier 1 areas and every 2-1/2 days in Tier 2 and 3 locations to minimize encroachments and monitor for potential threats. In 2023, the LPS recorded zero third-party damage incidents related to One-Call tickets, demonstrating the effectiveness of the damage prevention program.

To provide context, the LPS received 7,583 One-Call tickets in 2022 and 8,698 One-Call tickets in 2023, with 3,147 tickets requiring the pipeline to be marked. Additionally, 311 tickets were generated during ROW patrols. To ensure that One-Call tickets receive an adequate review, cleared tickets are rescreened by a different screener. The absence of incidents—despite the high volume of One-Call tickets—highlights the success of the program in proactively preventing third-party damage and maintaining the integrity of the pipeline system.

The Operations Control Center ensures the safe operating limits for all systems within the LPS. These limits are managed centrally and are accessible through LiveLink. Field Operations personnel work closely with Controllers based at the Tulsa Control Center, who remotely manage the pipeline. In the event of an AOC, Controllers promptly notify field personnel to investigate and address any anomalies.

Each year, the Controller workload is evaluated to ensure that Controllers have sufficient capacity to effectively monitor alarms, batch reminders, and other SCADA inputs. As part of this process, the number of acknowledged alarms per console is tracked and analyzed. Console 10, which oversees LPS assets, received an average of 366 alarms per day in 2022. This daily alarm rate has been slightly higher than other consoles at Magellan over the past two years.

To address this, Operations Control Center Management took the proactive step of expand Console 10 into Console 10N and Console 10S in 2024. The LPS assets went to Console 10S. This reduced the number of non-LPS activities on Console 10S, effectively reducing the workload and allowing Controllers more time to focus on critical pipeline operations.

Notably, in 2023 two new Controllers completed their training and became fully qualified to operate Console 10.

5.10. PE10: Community Relations

Magellan utilizes its LPS public awareness and damage prevention programs to fulfill its commitment to fostering collaboration in pipeline protection and providing critical information to potentially impacted communities regarding the detection and response to well-water contamination. In 2023, pipeline safety information was distributed to the following groups:

- Residents, businesses, and schools within 1/2 mile of the pipeline in urban areas and within 2 miles in rural areas
- Excavators and farmers located within 10 miles of the pipeline
- Emergency and public officials in each county on the ROW or within 20 miles of the pipeline

In compliance with 49 CFR 195.440, Magellan is required to periodically evaluate the effectiveness of its public awareness program. The audit team reviewed the most recent effectiveness report, which highlights Magellan's ongoing efforts to inform the public. The report also demonstrates how Magellan continuously refines its messaging and delivery methods to enhance engagement and communication with stakeholders.

As part of public outreach in 2023, Magellan partnered with the Smalley Foundation, which is known for its community outreach and educational programs, and for partnering with schools, first responders, and local communities. Its Texas School Safety Chapter provides resources such as pipeline safety toolkits, educational videos, workshops, and eLearning modules designed to "transform attitudes and influence behaviors about pipeline safety," as noted on the Smalley Foundation website. These initiatives focus on ongoing education and emergency preparedness.

Magellan also actively participated in outreach efforts, holding scheduled meetings with emergency responders and excavators in all 25 counties along the LPS ROW, as outlined in its *Longhorn Mitigation Plan Annual Commitment Implementation Status Report* (see Figure 1 in Section 1.1).

Based upon data provided in the 2023 Public Awareness Summary Report (summarizing 2022), 129,099 bilingual brochures were distributed during the annual mailing, with only 494 returned. Table 9 provides a 3-year summary of the sent vs returned mailers.

Table 9: Summary of Brochure Mailers

Year	Number of Mailers Sent	Number of Mailers Returned
2021	118,180	413
2022	123,796	471
2023	129,099	494

The following highlights are noted for the 2023 public awareness program:

- Made face-to-face contact with 133 emergency responders across all counties, providing maps and other information about the LPS in relation to public safety.
- Personal contact with 283 stakeholders along the LPS ROW via email, phone call, or face to face and posted several updates on the Magellan Facebook page.
- Made numerous face-to-face landowner contacts related to pipeline safety and land use.
- Continued operation of the Magellan kiosk program to distribute pipeline safety and damage prevention information, providing refills of promotional items for 13 legacy stores, and setting up an additional eight kiosks.

- Participated in quarterly local emergency planning committee (LEPC) meetings in Nueces County.
- Attended *TX 811 Damage Prevention Excavation Safety* event
- Maintained liaison by contacting 3,793 public officials and 8,743 additional emergency responders along the ROW via email (96% delivered) promoting pipeline safety, leak recognition, emergency response and pipeline awareness information.
- Sponsored a booth with giveaway items at the City of Bellmead's Brame Park in McLennan County
- Conducted several presentations for county departments and local contractors to discuss the importance of calling 811, while providing brochures, trinkets, and applicable maps

Magellan actively encourages individuals along the LPS ROW to report any suspected pipeline leaks. As a result of its enhanced public awareness and damage prevention programs—which include expanded mailing areas and additional outreach efforts—Magellan receives a considerable number of suspected-release reports. Many of these reports are ultimately linked to other pipeline operators or residential natural gas leaks. Despite the prevalence of false-positive reports, Magellan prioritizes safety by immediately halting LPS operations upon receiving such notifications. Personnel are promptly dispatched to assess the situation and determine whether the incident falls under Magellan's responsibility.

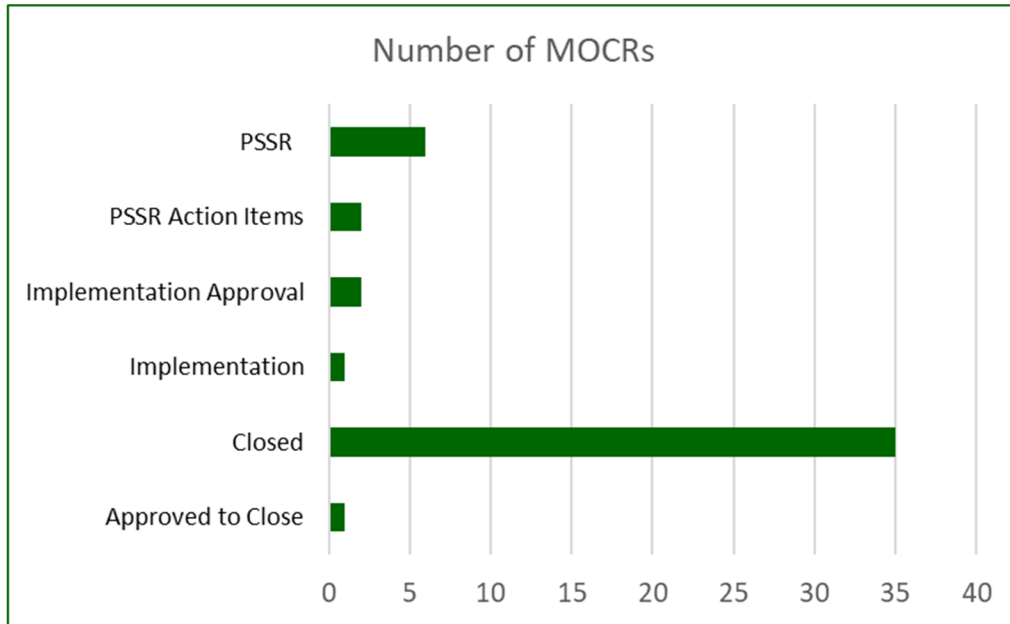
5.11. PE11: Change Management

Magellan has implemented a comprehensive MOCR process, supported by the use of the electronic tool (Velocity EHS) for the development and routing of standard MOCR forms. This tool facilitates the assignment of stakeholders and ensures proper approval workflows. MOCRs are generated for all changes related to non-SIP operating procedures and modifications to equipment or facilities. Emergency MOCRs follow the same review and approval process as standard MOCRs, with the added benefit of expedited processing through direct communication.

Before any changes are applied in the field, a pre-start-up safety review (PSSR) is conducted to ensure safety and compliance. LPS personnel emphasized the critical role of the PSSR, with interviewees noting that it serves as the final opportunity to identify and correct any issues before a change is implemented. Actions identified during the PSSR are documented and tracked to completion within the Operations organization.

In 2023, a total of 47 MOCRs were issued for the LPS, with none classified as emergency MOCRs. Of these, 13 MOCRs were identified as having an impact on the *Longhorn Mitigation Plan*, six of which remain open without a recorded closure or cancellation date. The audit team conducted a thorough review of the detailed reports for all 13 MOCRs related to the *Longhorn Mitigation Plan* and confirmed that they underwent the appropriate level of review by the relevant personnel or departments. The status of all 47 MOCRs is shown in Figure 2.

Figure 2: 2023 MOCR Status



5.12. PE12: Emergency Response and Preparedness

The Emergency Response Plan (ERP) for the LPS is tailored to address the specific conditions across the length of the pipeline system. Magellan has established 120 tactical sites along the LPS, ensuring that adequate procedures, personnel, and equipment are readily available to respond effectively in the event of a release. In the Austin region, where the Edwards Aquifer is located, an Oil Spill Response Organization (OSRO) is strategically stationed to provide specialized support. OSRO personnel are also integrated into local LPS operations, assisting with damage prevention efforts and conducting regular ROW inspections, including the required weekly foot patrols.

LPS employees are comprehensively trained, beginning with the 24-hour OSHA Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training, followed by annual refresher courses. In addition, all qualified individuals (QIs) must complete Federal Emergency Management Agency (FEMA) ICS 100 and ICS 200 courses to develop a solid understanding of the Incident Command System (ICS) and fundamental emergency management principles. Annual ERP training is mandatory for all Operations personnel and includes a thorough evaluation of the training programs and effectiveness of emergency response measures.

To further reinforce preparedness, site-specific drills or tabletop exercises are conducted annually. These drills involve collaboration with local emergency response personnel and agencies. Upon completion of each drill, after-action reviews are performed to assess whether the procedures were properly executed and determine their overall effectiveness. The outcomes of these evaluations are shared across LPS operational areas for review, with any action items entered into CMS and tracked to closure.

A live drill, which involved 150 ft of boom deployment, was performed on the Colorado River. The drill was supported by multiple area operations across the LPS and a few members of nearby LEPCs. The drill utilized all new equipment, and each item performed satisfactorily. The drill was deemed a success, and no after-action items were recommended.

In the event of a SCADA indicated rupture or report of suspected rupture, Magellan initiates its Code Red program, designed to deliver a standardized and immediate response to protect the public, employees, and the environment. Upon activation of a Code Red event, pipeline operations are immediately shut down and a multi-person interactive conference bridge is established, enabling all designated responders to communicate in real-time.

As part of the response protocol, the control center divides Code Red response activities among four designated control center personnel, referred to as the "4-on-the-floor" team. This allows the on-duty Controller to focus solely on executing a safe and controlled shutdown of pipeline operations. Meanwhile, the 4-on-the-floor team manages reporting requirements, coordinates internal and external notifications, and leads the conference bridge communication.

The Code Red procedure effectively initiates the ICS, ensuring that all critical company personnel are mobilized and equipped to respond appropriately. Employees interviewed demonstrated in-depth knowledge of the Code Red processes and emphasized that the structured and focused nature of the response minimizes environmental impacts while safeguarding both public and employee safety.

5.13. PE13: Incident Management

Magellan's incident management procedures, which elicit different investigation methods, utilize the classifications listed in Table 10.

Table 10: Incident Classifications

Classification	Description
Major	Events that result in a fatality, an injury requiring hospitalization, major news coverage, or property loss more than \$500M
Significant	Events that result in a fire or explosion with damage more than \$25M, gasoline product quality issues that are loaded out over the rack, or injuries and citations in excess of \$25M
Minor	Events that result in a fire or explosion with damage less than \$25M, non-gasoline product quality issues, and injuries or illnesses that require first aid
Near Miss	An unplanned, undesired event that did not result in significant harm or damage but which, under slightly different circumstances, could have resulted in a minor, significant, or major incident
Hazardous Condition	A hazard or any existing or potential condition in the workplace that—by itself or by interacting with other variables—can result in injury, property damage, and/or other losses
Repair	A temporary or permanent alteration made to the pipeline or its affiliated components that is intended to restore the allowable operating pressure or correct a deficiency that could result in a mechanical integrity failure

Magellan's HSE and Regulatory Compliance Groups are responsible for reviewing all incidents that occur within LPS to determine if a formal investigation is warranted. To ensure timely resolution, action items stemming from these investigations are documented and tracked in CMS. Results from incident investigations and the lessons learned are shared across LPS operational groups and are typically discussed during monthly SEMs and contractor safety tailgate meetings.

In 2023, a total of 35 Lessons Learned Bulletins were created and distributed throughout Magellan; however, none were specifically reported within the LPS region. The LPS experienced three hazardous near-miss events in 2023. Two of these involved leaking remote-operated valve (ROV) stems. In one instance, a valve completely filled its stem during a pigging operation, while in the other, a valve stem leak filled the secondary containment during a semi-annual inspection. Although no product escaped in either event, One valve was replaced in 2024 and the 2nd valve replacement is under consideration for 2025. The third near-miss event involved improper positioning of a manlift, where two wheels were positioned off the road, causing the equipment to become stuck. The job was shut down, and mechanical assistance was brought in to safely reposition the manlift.

A comprehensive breakdown of incident investigations since 2014 is provided in Table 11. These incidents and the lessons learned highlight the ongoing commitment to safety and continuous improvement across Magellan's operations.

Table 11: Historical Incident Investigation Breakdown

Type	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Hazardous Near Misses	3	2	2	3	0	4	8	4	5	2
Incident Investigations	1	3	4	4	3	3	24	8	18	10

For 2023, 64 AOCs and three hazardous near misses were recorded. Most of these events occurred during start-up or shutdown of various systems. Each event was investigated to understand the root cause and to develop the necessary corrective actions to prevent the recurrence of similar events.

Table 12 provides the number of abnormal operations events that have occurred over the past 9 years.

Table 12: Historical Incorrect Operations / Near Miss Breakdown

Event Type	2023	2022	2021	2020	2019	2018	2017	2016	2015
Abnormal Operations	64	41	14	18	21	18	12	14	44

As reflected in Table 12, the total number of AOCs remained relatively stable from 2016 through 2021. The increases observed for 2022 and 2023 can be attributed to enhanced reporting practices. In particular, AOCs involving loss of communication, loss of power, and seal failure are now categorized differently than in previous years.

In 2023, there was a total of 35 AOCs primarily caused by component malfunctions. Discussions with Operations and Engineering teams revealed that many of the component failures were the result of hazardous gas sensor malfunctions and switch/seal failures, largely caused by clogged drain lines. Magellan is currently investigating options to reduce the clogging cause by insects.

These insights emphasize the importance of continued monitoring and proactive maintenance, particularly regarding component reliability and system infrastructure.

5.14. PE14: Compliance Management

Magellan utilizes its CMS to document and track compliance with regulatory requirements and the completion of associated tasks. The CMS includes a task management feature that automatically sends reminder emails to task owners as deadlines approach. Additionally, the system provides robust reporting capabilities that document both regulatory compliance and the status of the *Longhorn Mitigation Plan*.

Magellan assigns dedicated personnel at various levels of the organization to oversee and ensure compliance. These personnel are responsible for monitoring task completion and facilitating communication regarding compliance issues across the organization. Magellan performs several types of internal audits and compliance reviews. CMS compliance reviews are conducted every 1 to 3 years, while Magellan's internal audit group conducts environmental audits approximately every 5 years. In 2023 a PHMSA audit was conducted, which identified zero infractions, reflecting strong adherence to regulatory standards.

In addition to meeting the operational requirements under 49 CFR 195, the LPS is subject to the specific conditions outlined in the *Longhorn Mitigation Plan*. To demonstrate compliance with these conditions, Magellan published several reports, including the Longhorn Pipeline Mitigation Plan Scorecarding & Performance Metrics and the Longhorn Mitigation Plan Annual Commitment Implementation Status Report. These reports are compiled manually using internal system data and narrative descriptions related to the plan's commitment requirements. Both reports are updated annually, in conjunction with Magellan's annual self-audit process.

For the 2023 self-audit, a wide range of reports and documents were reviewed by the audit team, both during onsite interviews and through off-site analysis. A list of the key documents reviewed is provided in Appendix B. These reviews revealed a strong commitment to regulatory compliance throughout the Magellan organization, as well as among the personnel responsible for managing compliance tasks.

5.15. PE15: Commercial Operations

This SIP element is not covered under the 2023 self-audit, as it does not impact LPS operations.

6.0. Considerations

In the 2023 LPS SIP self-audit, auditors determined that the requirements and commitment to the LPS SIP are well-integrated within Magellan's company culture and actively followed by employees. However, maintaining and enhancing this culture necessitates ongoing evaluation and continuous improvement. Accordingly, the auditors have outlined the considerations detailed in the following subsections for enhancing the LPS SIP and advancing process improvements.

6.1. Asset Integrity

Magellan currently runs DEF tools every three years and the number of DEF digs has been decreasing over the past few years. However, requirements in 49 CFR \leq 195.591 and API 1163 only require DEF tools to be run every 5 years. Consequently, Magellan should consider changing the 3-year frequency to 5 years

6.2. Program and Compliance Management

Since 2005, Magellan has conducted comprehensive annual third-party self-audits, as well as ORA audits. The process and procedure recommendations arising from these audits have been successfully implemented and continually refined over Magellan's extensive operational history. During the 2023 audit, all personnel interviewed responded promptly and consistently, demonstrating a clear and thorough understanding of the LPS SIP protocols and requirements, which are evidently embedded within the company culture. Additionally, auditors noted that many elements assessed during the self-audit process are aligned with the standards reviewed in the annual ORA, reflecting Magellan's integrated approach to continuous improvement and compliance.

Based on the history and success of the annual LPS SIP self-audits and ORA audits, Magellan should consider contacting PHMSA to seek a change in the frequency requirement for performing one or both audits.

7.0. Conclusion

The audit team's 2023 assessment confirms that LPS operational and support personnel have successfully managed all deliverables associated with the LPS SIP. Personnel exhibited strong program knowledge, attention to detail, and commitment to the LPS SIP, indicating that the required protocols are deeply integrated into the organizational culture. Interviews conducted during the audit demonstrated prompt, detailed responses from personnel, further affirming the cultural adoption of LPS SIP standards. Additionally, the records and documentation reviewed underscore a strong cultural alignment with the LPS SIP. The supporting programs in place are comprehensive, well-developed, and designed for longevity.

To encourage continuous improvement, the 2023 audit provides additional program recommendations, outlined in Section 5.0, complementing suggestions from previous self-audits. Overall, the LPS SIP appears robust and effectively implemented.

Appendix A Acronyms

Term	Description
API	American Petroleum Institute
AOC	abnormal operating condition
ATW	authorization to work
bbl	barrels
CFR	Code of Federal Regulations
CMS	compliance management system
CP	cathodic protection
DEF	deformation inspection tool
DPO	Damage Prevention Operator
DOT	U.S. Department of Transportation
EFRD	emergency flow-restriction device
EFW	electric-fusion-welded
EMR	experience modification rate
ERP	emergency response plan
FIMP	facility integrity management program
FRA	facility risk assessment
FSP	facility security plan
FSR	facility safety review
FVA	facility vulnerability assessment
HAZMAT	hazardous materials
HAZWOPER	OSHA's Hazardous Waste Operations and Emergency Response Standard
HCA	high consequence area
HSE	Magellan's Health, Safety and Environmental (Group)
ICS	Incident Command System
ILI	in-line inspection
IMP	integrity management program
IR	incident rate
ITP	individual training plan
JHA	job hazard analysis
KPI	key performance indicator
LEPC	local emergency planning committee

Term	Description
LMRA	last-minute risk assessment
LMS	learning management system
LOTO	lockout/tagout
LPS	Longhorn Pipeline System
MAPS	Magellan ArcGIS portal system
MFL	magnetic flux leakage
MOC	management of change
MOCR	management of change request
NACE	NACE International (formerly the National Association of Corrosion Engineers), now part of the Association for Materials Protection and Performance (AMPP)
NEO	new employee orientation
O&M	operations and maintenance
OQ	operator qualification
ORA	operational reliability assessment
OSHA	U.S. Occupational Safety and Health Administration
PE	process element
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPE	personal protective equipment
PSSR	pre-start-up safety review
ROW	right-of-way
SBRMA	scenario-based risk mitigation analysis
SEM	safety engagement meeting
SIP	Magellan Midstream Partners, L.P. System Integrity Plan
SME	subject-matter expert
SMFL	spiral magnetic flux leakage
TFI	transverse field inspection
TPD	third-party damage
TRIR	total recordable incident rate
UCD	ultrasonic crack detection

Appendix B List of Key Documents and Interviews

B.1. Self-Audit Documents

No.	Document Name
1	Magellan System Integrity Plan
2	2023 Mitigation Plan Score Card & Performance Metrics
3	2023 Mitigation Plan Commitment Implementation Status Report
4	2023 Incorrect Operations Spreadsheet
5	2023 Asset Integrity Report
6	2023 Action Item Spreadsheet
7	2023 API 653 Internal and External Inspections and issues identified
8	2023 Longhorn Year End Preventative Maintenances Tasks Summary (CMS summary provided)
9	2023 Abnormal Operating Condition (AOC) Report
10	2022 Incident Data Reports
11	2023 Incident Investigation Reports and actions taken (Investigation Events)
12	Facility Inspection Forms
13	2023 ILI Data <ul style="list-style-type: none"> • LMP 2023 Digs • LMP 2023 PMI • LMP 2023 Runs • Longhorn 2023 ILI and Digs
14	2023 IMP Performance Measures Annual Report
15	2023 Management of Change Data: <ul style="list-style-type: none"> • Selected MOCR Reports (EI Paso Tank No. 25) • Open MOCR list • Closed MOCR list • Pre-Start-Up Safety Reviews (PSSRs)
16	2023 Lessons Learned and Safety Alert Bulletins
17	2023 Scenario Based Risk Mitigation Analysis (SBRMA)
18	All correspondence to/from local, state, and federal agencies regarding incidents, drills, inspections, or other issues
19	2023 Valve Inspection Reports
20	2022 Operations Reliability Assessment Reports and actions summary

No.	Document Name
21	2023 Corrosion Control Records: <ul style="list-style-type: none"> • MPL Longhorn Rectifier Maintenance Activity Report • MPL Longhorn Test Point Exception Report • Atmospheric Maintenance Report • Close Interval Survey Results for Tier III • Coupon Test Results • Rectifier and Critical Bonds Records • And additional maintenance required reports
22	2023 Leak Detection Summary report
23	2023 Public Awareness Self-Assessment
24	2023 Public Awareness Summary & Effectiveness Report
25	May 2023 Public Awareness Newsletter
26	2023 Facility Risk Assessment (FRA) Spreadsheets
27	2023 Overpressure Inspection Records
28	2023 Longhorn ERP Exercise and Deployment & After Action Review
29	2023 Annual Fault Monitoring (1 st and 2 nd half reports)
30	Facility Safety Reviews
31	2023 Water Crossing Inspection reports
32	Take 5 for Safety Overview
33	Houston to Crane Corrosion Action Item Tracking spreadsheet
34	2023 Longhorn Year End Task Summary
35	2023 Longhorn Work Order Spreadsheet
36	Code Red Response Plan Aug 9, 2024
37	2022 verses 2023 One-call Ticket Comparison Spreadsheet

B.2. Personnel Interviews

The following subsections list the personnel in attendance at each local-office interview that was conducted for this year's self-audit. In each case, Matt Argo was in attendance and supported the interview process.

B.2.1. Austin Interviews

Name	Title
Don Ford	Damage Prevention Operator
Luke Potratz	Manager Operations
Danny Stokes	Area Supervisor

B.2.2. Tulsa Interviews

Name	Title
Matt Argo	Supervisor Integrity Engineering
Rick Bondy	Supervisor Emergency Response & Security
Amber Kistler	Safety & Health Coordinator
David Darbonne	Manager Corrosion
Gracie Riess	Manager, Pipeline Integrity
Taylor King	Supervisor, Integrity Mgmt. & Regulatory Compliance
Dyan Gillean	Supervisor One-Call
Kasey Miller	Damage Prevention & Public Awareness Specialist
Mike Hampton	Damage Prevention & Public Awareness Specialist
Joe Butler	Director Operation Control
Karrisa McCarty	Manager, Operations Control
Brad Niehaus	Supervisor Operations Control
Katie Smith	Environmental Professional
Monica Olason	Environmental Professional

B.2.3. Crane Interviews

Name	Title
Jared Irvin	Area Supervisor
Chad Murphy	Area Supervisor
Kyle Rauch	Operations Supervisor

B.2.4. El Paso Interviews

Name	Title
Clif Bryant	Area Supervisor
Jason Flores	Operations Supervisor
Eddie Palacios	Corrosion Technician



Appendix C Auditor Statements of Qualifications

C.1. William C. Bannister – Regulatory Compliance Practice Director

C.1.1. Summary

William (Bill) C. Bannister has over three decades of management and training experience, primarily focused in the oil and gas industries where he has become an expert in corrosion management, PHMSA regulatory compliance, OQ, and safety management systems. Coupled with his expertise in operations, training, audit support, and project management, he has guided several industry companies in achieving safe, reliable, and compliant operations. One of Mr. Bannister's special interests is process safety management (PSM), which allows for leveraging his many other areas of expertise to perform risk analysis and hazard assessments from a coordinated, varied, and operational perspective. Mr. Bannister provides clients with expert guidance across all aspects of their regulatory compliance and operations requirements and offers insights into their training, OQ, workforce development, project management, and corrosion control programs.

C.1.2. Experience

Integrity Solutions® Ltd, 2019–Present

- VP of Consulting
- Regulatory Compliance Practice Director

NuStar Energy, 2009–2018

- Director of Operations – East Region
- Senior Manager – Training and Development
- Corrosion Manager

BP U.S. Pipelines, 2000–2009

- OQ and Training Manager / Corrosion Specialist

Corrpro Companies, 1996–2000

- Project Manager and Construction Foreman

Lakehead Pipeline (now Enbridge), 1985–1996

- Operator and Corrosion Technician

C.1.3. Education

B.Sc. Organizational Leadership and Supervision – Purdue University (West Lafayette, Indiana)

C.1.4. Certifications / Training

- NACE International – Cathodic Protection II
- NACE International – Coatings Inspector-in-Training

C.1.5. Associations

- American Pipeline Institute – Operator Qualification Committee, 2003–2008

- American Society of Mechanical Engineers – ASME B31Q Pipeline Personnel Qualification Committee, 2005–2008

C.2. Jomary Franqui – Senior Integrity Management Consultant

C.2.1. Summary

Jomary Franqui has over 15 years of oil and gas pipeline IMP, regulatory compliance, incident assessment, audit support, and project management experience. She has experience using risk modeling software to calculate hazardous liquids and gas pipeline risk of failure and has led teams investigating leak incidents, assessing root causes, and recommending preventive and mitigative (P&M) measures such as EFRDs and procedure enhancements. Mrs. Franqui led the IMP team for a mid-size oil pipeline transportation and storage company, ensuring the timely completion of hydro and ILI assessments per ongoing analyses (HCA, threats, MOP, etc.), coordinating all PHMSA compliance activities and team analyses, and writing post-assessment reports. Mrs. Franqui uses her intimate knowledge of 49 CFR 192/195 requirements and hands-on industry experience to advise clients regarding risk modeling, analysis, and reporting; the development and enhancement of IMP procedures; regulatory compliance and audit preparation; asset due diligence; and data management planning, gathering, and integration.

C.2.2. Experience

Integrity Solutions® Ltd, 2015–Present

- Senior Integrity Management Consultant

Enterprise Products, 2014–2015

- Senior Pipeline Integrity Engineer

NuStar Energy, 2009–2018

- Manager, Pipeline Integrity Engineering

C.2.3. Education

- B.Sc. Mechanical Engineering – Texas Tech University (Lubbock, Texas)

C.2.4. Certifications / Training

- Professional Engineer, Texas (#107306)

C.2.5. Associations

- American Pipeline Institute – Pipeline Integrity Work Group (PLIG), 2013, 2024