

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	1 of 15

Brunel Energy, Inc.

Lock Out Tag Out - LOTO

Contents

1. Purpose	2
2. Applicability	2
3. Definitions	2
4. Responsibilities	4
5. Requirements	5
5.1. General Lockout / Tagout Steps	5
5.2. Lockout / Tagout for Electrical Plug-Type Equipment	7
5.3. More Than One Technician	7
5.4. Group Lockout or Tagout	7
5.5. Routine Maintenance Special Machine Adjustments	8
5.6. Locks, Hasps and Tags	8
5.7. Management Removal of Lockout	8
5.8. Restoring Machinery and equipment to Service	8
6. Training	9
7. References	10
8. Appendices	10

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	2 of 15

1. Purpose

- 1.1. Brunel Energy, Inc., hereinafter referred to as, the “Company,” has established a program compliant with OSHA 1910.147.
- 1.2. The purpose of this program is to establish procedures for affixing appropriate lockout/tagout equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

2. Applicability

- 2.1. This policy applies to employees, subcontractors and/or visitor(s) of the Company. For the purposes of this policy, an employee shall be considered on the job whenever he/she is:
 - 2.1.1. On or in, any Company or client property, including parking areas; or
 - 2.1.2. On company time even if off Company premises (including paid lunch, rest periods and periods of being on call).
- 2.2. As a condition of employment, Company employees are required to abide by additional governmental or customer policies and requirements that may be imposed at a worksite in addition to the requirements of these policies and procedures. Nothing set forth in this policy constitutes, construes, or interprets in any way as a contract of employment.

3. Definitions

- 3.1. Affected employee is an employee whose job requires them to operate or use a machine or equipment on which servicing, and maintenance is being performed under lockout/tagout, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.
- 3.2. Authorized employee - A person that performs lockout/tagout procedures on machines or equipment to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee’s duties include performing servicing or maintenance covered under this program.
- 3.3. Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.
- 3.4. Energized - Connected to an energy source or containing residual or stored energy.
- 3.5. Energy isolating device - A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following:

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	3 of 15

- 3.6. A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors and no pole can be operated independently, a line valve, a block and any similar device used to block or isolate energy.
- 3.7. Push buttons, selector switches and other control circuit type devices are not isolating devices.
- 3.8. Energy Source – All sources of energy, including but not limited to electrical, fuel, pressure, hydraulic, pneumatic, gravity, chemical, thermal, and mechanical.
- 3.9. Hot tap - A procedure used in the repair, maintenance and service activities that involves welding on a piece of equipment (pipelines, vessels, or tanks) under pressure, in order to install connections or other appurtenances (note: 1910.147 (2) (iii) [B] [1] [2] [3]).
- 3.10. Lockout - The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
- 3.11. Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.
- 3.12. Normal operation - The utilization of a machine or equipment to perform its intended operation. Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or start-up of the equipment or release of a hazardous energy source.
- 3.13. Setting up - Any work performed to prepare a machine or equipment for performing its normal operation.
- 3.14. Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
- 3.15. Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.
- 3.16. TRA – Task Risk Analysis.
- 3.17. SCR – Service Control Room.
- 3.18. MCC – Motor Control Center.
- 3.19. SMS – Safety Management System.
- 3.20. SM/FS & DH – Site Manager, Field Supervisor, Department Head.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	4 of 15

4. Responsibilities

4.1. Manager and HSE Supervisor(s):

- 4.1.1. Responsible to control and enforce this plan and to see that all their employees and contractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- 4.1.2. Ensure employees are trained and comply with the requirements of this program.
- 4.1.3. Implement, support, and enforce this program and ensure the energy control (Lockout/Tagout) procedures are inspected/reviewed annually.
- 4.1.4. Periodically review and evaluate the program's overall effectiveness, and to make modifications, as necessary. (See Appendix 8.5 – Annual Audit Lockout / Tagout Program).
- 4.1.5. Develop lockout / tagout procedures for specific pieces of equipment at each facility that are routinely locked/tagged out for maintenance/ servicing purposes and review annually.
- 4.1.6. Certify that annual inspections are performed for all equipment-specific procedures. The certification shall identify the machine or equipment on which the energy control procedure was utilized, the date of the inspection, the employees included in the inspection and the person performing the inspection. The Lockout / Tagout Periodic Inspection Form is attached in Appendix 8.1.
- 4.1.7. Shall assign authorized (qualified/unqualified) employees and create authorization lists based on equipment type annually.
- 4.1.8. Ensure employees attend and complete the required annual Lockout/Tagout training.

4.2. Employees

- 4.2.1. The Company employees shall be familiar with and comply with the contents of this program.
- 4.2.2. The designated person in charge is responsible for the Lockout/Tagout Program and will act as the program administrator and coordinator.
- 4.2.3. Every employee has the responsibility and authority to stop any unsafe job or unsafe task being conducted and should immediately request Supervisor involvement to resolve the issue. The employee's judgment call, when made in good faith and using good judgment, shall be considered commendable even though the conclusion of the investigation might be found to be the contrary.
- 4.2.4. Employees who are affected by this program are required to attend training on an annual basis.
- 4.2.5. Are required to follow the provisions of this program.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	5 of 15

- 4.2.6. Have knowledge of the energy magnitude (preparation for shutdown) prior to turning off a machine.

5. Requirements

5.1. General Lockout / Tagout Steps

- 5.1.1. The Company utilizes a Lockout / Tagout system to control the isolation of energy sources at the worksite and lockout tagout devices meet requirements listed:
- 5.1.1.1. Durable and capable of withstanding the environment to which they are exposed for the maximum period exposure is expected.
 - 5.1.1.2. Standardized within the facility in at least one of the criteria: color, shape, size, and case of tagout devices print and format shall be standardized.
 - 5.1.1.3. Substantial enough to prevent removal without use of excessive force or unusual techniques, such as with bolt cutters or other metal cutting tools.
 - 5.1.1.4. Identifiable indicating the identity of the employee applying the device.
 - 5.1.1.5. Only authorized employees shall perform the LOTO servicing and maintenance.
- 5.1.2. In preparation for Lockout / Tagout, a survey shall be made by the Supervisor to locate and identify all energy sources that are subject to this procedure and address an appropriate machine/equipment shutdown procedure.
- 5.1.3. Prior to any repair work or maintenance on any equipment, an appropriate Isolation Permit Checklist and Equipment Specific Lockout / Tagout Procedure form (Appendix 8.2 and 8.3) shall be completed before starting the job.
- 5.1.4. The Equipment Specific Lockout / Tagout Procedure form must include, but is not limited to, the authorized employee, affected employees and form of employee notification.
- 5.1.5. Prior to starting work, repairing, adjusting, or replacing machinery and equipment that is connected to an energy source, the authorized employee shall verify that isolation and de-energization of the machine or equipment has been accomplished and energy source must be isolated, the following instructions will be utilized to place the machinery and equipment in a neutral or zero energy state. The machine or equipment shall be shut down using the procedures established for the machine equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard to employees because of equipment stoppage:
- 5.1.5.1. Work Permit must be in place for isolation and de-isolation of equipment. In most cases this will be covered by the same Work Permit, except where a tour change occurs or in the event of long-term isolation.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	6 of 15

- 5.1.5.2. All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.
- 5.1.5.3. Isolation Checklists are completed showing the details of locks and tags and the name of the individual who placed the device.
- 5.1.5.4. Notify all affected personnel that the machinery, equipment, or process will be out of service. If the machinery, equipment, or process is in operation, follow normal stopping steps (i.e.: depress stop button, open toggle switch, etc.).
- 5.1.5.5. Employees who prepare machinery/equipment for shutdown will have all applicable training/ procedures and knowledge of any energy magnitude, hazards of energy and the means of controlling energy during orderly shutdown of equipment to ensure no increased hazards to other employees.
- 5.1.5.6. Move switch or panel arms to “Off” or “Open” positions and close all valves or other energy isolating devices so that the energy source(s) is disconnected or isolated from the machinery or equipment. Stored energy equipment (e.g.: capacitors, springs, elevated members, rotating fly wheels, and hydraulic / air / gas / steam systems) must be relieved or restrained by grounding, repositioning, blocking, and/or bleeding.
- 5.1.5.7. Lockout and tagout all energy devices by use of hasps, chains and valve covers with an assigned individual lock and tag affixed so that its clearly indicated “OFF” on the tag affixed.
- 5.1.5.8. If safe to do so, test all lockout and tagout processes by following the normal start up steps.
- 5.1.5.9. Machinery or equipment is now locked out and tagged out.
- 5.1.5.10. Assign a competent individual who will oversee shift change lockout operations and group lockout/tag outs. Should the shift change before the machinery or equipment can be restored to service, the lock and tag must remain. If the task is reassigned to the next shift, those employees must perform a review of the work, including lockout / tagout status with their reliefs before they may transfer their lock, key, and tag.
- 5.1.6. A work Permit is valid for work conducted within one tour and a new Work Permit must be raised for new tour.
- 5.1.7. An Isolation Log must be maintained and kept up to date showing the status of all isolations. It shall contain all locking and isolating devices codes and numbers to keep track of every single device. (See Appendix 8.4 – Isolation Log).
Caution: After test, place controls back in 'neutral' position.
- 5.1.8. Ensure that all stored energy is released and has dissipated after a lockout device is installed and the potential for re-accumulation of energy is prevented by positive

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	7 of 15

isolation and where isolation cannot be assured that periodic re-verification of isolation is carried out until equipment is brought back into service.

5.1.9. The isolation/zero energy is verified after a lockout device is installed.

5.2. Lockout / Tagout for Electrical Plug-Type Equipment

5.2.1. When working on, repairing, or adjusting electrical plug-type equipment, the following instructions must be utilized to prevent accidental or sudden start-up:

5.2.1.1. Un-plug electrical equipment from wall socket or in-line socket.

5.2.1.2. Attach "Do Not Operate" Tag on end of power cord.

5.2.1.3. If safe to do so test equipment to assure power source has been removed by depressing the "Start" or "On" switch.

5.2.1.4. Perform required operations.

5.2.1.5. Replace all guards removed.

5.2.1.6. Inspect power cord and socket before removing Tag. Any defects must be repaired before placing the equipment back in service.

5.2.1.7. Remove Tag and place equipment back in service.

NOTE: Occasionally used equipment should be unplugged from power source when not in use.

5.3. More Than One Technician

5.3.1. In the preceding steps, if more than one technician is assigned to a task requiring a lockout and tagout, each must also place his or her own lock and tag on the energy isolating device(s).

5.4. Group Lockout or Tagout

5.4.1. When maintenance is performed by a crew or other group, they shall utilize a procedure which grants the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

5.4.2. Group lockout or tagout devices used in accordance with the procedures required by this program including, but not necessarily limited to the following requirements:

5.4.3. Assign a responsible authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock).

5.4.4. Ensure authorized employee ascertains the exposure status of individual group members about the lockout or tagout of the machine or equipment; and

5.4.5. When more than one crew, department, etc., is involved, assignment of overall job-associated lockout or tagout control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection: and

5.4.6. Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when the individual begins

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	8 of 15

work, and shall remove those devices when the individual stops working on the machine or equipment being serviced or maintained. Supervisor is forbidden to remove the group LOTO device until each authorized employee in group has removed their personal device.

5.5. Routine Maintenance Special Machine Adjustments

- 5.5.1. Where possible, equipment shall be arranged to allow safe access to routine maintenance points (e.g.: Grease nipples) when operating.
- 5.5.2. The Lockout / Tagout process may not be utilized if the machinery or equipment must be operating to perform routine maintenance safely and accurately or perform adjustments. This rare exception may only be carried out by trained and authorized employees when a task-specific Task Risk Assessment (TRA) has been developed to identify hazards and management risks. In such instances a Work Permit and appropriate Isolation Checklist should still be completed with appropriate comments provided.

5.6. Locks, Hasps and Tags

- 5.6.1. Lockout / Tagout Stations are located on the wall in the designated location and at appropriate locations at other relevant worksites.
- 5.6.2. Maintenance personnel will maintain an appropriate number of numbered locks with associated keys, hasps, and tags from the Lockout / Tagout Station as required to completely de-energize equipment and machinery.
- 5.6.3. All locks will be keyed differently with extra keys being maintained by the Manager / Field Superintendents or Department Head (M/FS & DH) in a locked key cabinet. Additional locks may be checked out from the M/FS & DH or Senior Mechanic / Electrician.
- 5.6.4. The locks and/or tags shall identify the individual applying the device.

5.7. Management Removal of Lockout

- 5.7.1. Only the employee that locks out and tags out machinery, equipment or processes may remove his/her lock and tag. However, should the employee leave the worksite before removing his/her lock and tag, the senior maintenance supervisor may remove the lock and tag, but only when the planned work is confirmed as complete, all tools have been removed, all guards have been replaced and all employees are free from any hazard before the lock and tag are removed and the machinery, equipment or process are returned to service. The Isolation Log should be updated to reflect Supervisors removal of the lock and tag.

5.8. Restoring Machinery and equipment to Service

- 5.8.1. When the task is complete, and the machinery, equipment or process is ready for testing when LOTO devices are temporarily removed or return to normal service:
- 5.8.2. Check the area to ensure a safe start up and that no employee is exposed to any hazard.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	9 of 15

- 5.8.3. Clear away all tools and account for all tools and check all safety guards.
- 5.8.4. Remove lock and tag. Restore energy sources. Test to assure equipment process integrity.
- 5.8.5. Proceed with testing, de-energize and reapply control measures.
- 5.8.6. Close out isolation log, permit to work and the device register, stating condition and machinery status.

6. Training

- 6.1. All employees shall be instructed in the safety significance of the 'Lockout/Tagout' Procedures. The instruction shall be completed by the SM/FS & HD or designate during initial induction and thereafter during annual refresher training.
- 6.2. Specific Lockout and Tagout training shall be provided to operations and maintenance personnel directly involved with equipment operation, maintenance, and repair.
- 6.3. Training will be documented, and records should be maintained to ensure those requiring training are trained and retrained at appropriate intervals.
- 6.4. Training should ensure that the purpose and function of the lockout/tagout program is understood and that the knowledge and skills required for the safe application, usage and removal of energy controls are conveyed to the employees. The training shall include the following:
 - 6.4.1. Each authorized employee shall receive training in the recognition of applicable types of potential energy sources that may require lockout/tagout, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
 - 6.4.2. Each affected employee shall be instructed in the purpose and use of the energy control procedure.
 - 6.4.3. All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked or tagged out.
- 6.5. Training should specifically encompass recognition of hazardous energy sources, type, and magnitude of energy in the workplace, methods and means necessary for energy control and the purpose and use of the lockout/tagout program.
- 6.6. Retraining shall be provided whenever there is a change in the lockout/tagout program and whenever job changes or changes in equipment present a new hazard.
- 6.7. All training must be documented, signed, and certified, including the date and employee names attending the training.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	10 of 15

7. References

- 6.8. SMS 03, 3.2 – Risk Assessment.
- 6.9. SMS 03, Form 3.2a – Task Risk Assessment Worksheet.
- 6.10. SMS 03, 3.3 – Permit to Work System.
- 6.11. IADC HSE Reference Guide, Revised Edition, Jan. 2004, Section 3.1 – Control of Hazardous Energy.
- 6.12. API RP 505, Recommended Practice for the Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Zone 0, Zone 1, and Zone 2. 1st Edition, Nov. 1997.

8. Appendices

- 6.13. Appendix 8.1 – Lockout / Tagout Periodic Inspection
- 8.1. Appendix 8.2 – Equipment Specific Lockout / Tagout Procedures – Page 1
- 8.2. Appendix 8.3 – Equipment Specific Lockout / Tagout Procedures Template – Page 2
- 8.3. Appendix 8.4 – Isolation Log
- 8.4. Appendix 8.5 – Annual Audit Lockout / Tagout Program

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	11 of 15

APPENDIX 8.1 LOCKOUT / TAGOUT PERIODIC INSPECTION

Date: _____ Time: _____ Supervisor Signature: _____

Facility: _____ Location: _____

Equipment Locked Out: _____

Employees involved in Lockout/Tagout: _____

Did Employees Know Responsibilities? (Circle one): Yes No

Deviations/Inadequacies Observed: _____

Recommendations Addressing Deviations/Inadequacies or Program Enhancements: _____

Time of Last LOTO Training? _____

Upon completion, please forward to the Health, Safety & Environmental Department for corrective action (if any) and keep one copy for documentation/filing.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	12 of 15

APPENDIX 8.2 EQUIPMENT SPECIFIC LOCKOUT / TAGOUT PROCEDURE – PAGE 1 of 2

Equipment Name:			
Qualified Person:	(Name)	(Contact Number)	(Date)
Equipment Location:			
Affected Employees:	(List)		
Employee Notification:	(Circle all that apply) Site Meeting Verbal Other (List)		
Energy or Hazard:	(Circle all that apply) Chemical Electrical Fuel Pneumatic Gravitational Hydraulic Mechanical Pressure Stored Energy Thermal Other (List)		
Energy Magnitude:	(i.e.: 120 volts, 500 psi, 20,000 lbs.)		
Energy Controls, Isolating Devices and Locations:			
Methods to Dissipate Stored Energy:			
Method to Verify the Equipment Isolation:			
Steps to Lockout and Re-energize are listed on page 2 of this form.			

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	13 of 15

APPENDIX 8.3 EQUIPMENT SPECIFIC LOCKOUT / TAGOUT PROCEDURE TEMPLATE – PAGE 2 of 2

Steps to Lockout		Completed
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Steps to Re-energize		Completed	
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Returned to Service:	(Name)	(Date)	(Time)

Recommended Attachments:
 Pictures of equipment showing where to place locks/tags and switches & Location of equipment.

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	14 of 15

APPENDIX 8.4 ISOLATION LOG

Energy or Hazard:	(Circle all that apply)					
	Chemical	Electrical	Fuel	Pneumatic	Gravitational	Hydraulic
	Pressure	Thermal	Suction	Discharge	Fuel Gas	Stored Energy
	Start Gas	Batteries	Blow Down	By-Pass	Electrical	Compressed Air
	Other (list)					
Date of Isolation:	___/___/_____					
Description of Work:						
List of Equipment Out of Service:						
Necessary Requirements of Isolation:						
Authorized Employee:						
Signature:						
Person Continuing Work:						
Signature:						

LOCKS/TAGS FOR GROUP LOCKOUT OR MULTIPLE LOCKS/TAGS

Version: 24.0	Lock Out Tag Out - LOTO	
	Effective Date	May 20, 2024
	Page	15 of 15

APPENDIX 8.5 ANNUAL AUDIT LOCKOUT / TAGOUT PROGRAM

I certify that an audit of the Company Energy Services Lockout / Tagout Program was conducted, and that each employee has been trained in the recognition and procedures to lockout equipment they may be required to work on or may be affected by.

I further acknowledge that the current procedure is adequate to safely lockout equipment at this worksite for servicing and maintenance.

Department:	_____
Manager (or representative):	_____
Date:	_____
Original to file	