



Energy Isolation Standard

1. PURPOSE

This standard describes Expand Energy's (EXE's) practices to achieve energy isolation during installation, maintenance, service, and repair activities on machines and equipment. This standard establishes the minimum requirements for Lockout Tagout and Try (LOTO) to protect workers from unexpected releases of hazardous energy.

2. SCOPE

This standard applies to all Expand Energy facilities and worksites and all personnel employed by Expand Energy who perform work on EXE machines and equipment.

Contractors **shall** have their own OSHA-compliant Energy Isolation / LOTO program but are expected to participate in the Expand Energy Group Lockout when conducting service or maintenance activities on EXE equipment.

Contractors **shall** utilize their company LOTO program to isolate and work on their machines and equipment located on an Expand Energy worksite. Examples include but are not limited to Drilling, Completions and Well Intervention operations.

3. DEFINITIONS

Affected Individual – Individuals who operate or use machines and equipment on which service or maintenance occurs under LOTO, or who work in the immediate vicinity of servicing or maintenance being performed.

Authorized Individual - Individuals who lock out or tag out machines and equipment for service and maintenance activities. These individuals **shall** be designated and trained on Energy Isolation / LOTO. Personnel are considered an Authorized Individual if they do any of the following:

- (1) lock out or tag out machinery/equipment to perform servicing or maintenance themselves, or
- (2) implement any step in a LOTO procedure, such as:
 - (a) perform energy source isolation;
 - (b) implement lockout and/or tagout on machines or equipment;
 - (c) release or dissipate potential (stored) energy;
 - (d) verify energy isolation (Try);
 - (e) implement actions to release LOTO; or
 - (f) test or position machinery or equipment.

Bleeder – A device used to depressurize and vent process equipment.

Capable of Being Locked Out - Having a built-in locking mechanism that has a hasp (or other means) for attaching a lock to an energy isolating device.

Energized - Connected to an energy source or contains residual / stored energy.

Energy Isolating Device – A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

- Manually operated electrical circuit breaker
- Disconnect switch
- Manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently
- Line valve, block valve or any similar device used to block or isolate energy

NOTE: Push buttons, selector switches, control circuit type devices, butterfly valves and check valves are not energy isolating devices.

Energy Isolation Procedure (EIP) – Documents how hazardous energy is isolated, controlled via LOTO, and verified safe for service and maintenance for a particular piece of equipment.

Energy Source – Any source of electrical, mechanical, hydraulic, pneumatic, thermal, chemical, residual stored energy, gravity, pressurized liquids and gases.

Group Lockout – When more than one Authorized Individual is involved in the service or maintenance activity and exercises control over the hazardous energy by attaching their personal lock onto the Group Lockout mechanism (hasps or lock box). Expand Energy will initiate Group Lockout for company owned machines and equipment (EXE lock will be “First on, Last off” in the Group Lockout mechanism).

Lockout – The placement of a lockout device (i.e., lock, locking hasp, etc.) on an energy isolating device in accordance with an established procedure, to ensure the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device – A device that utilizes a positive means such as a keyed lock to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

Out-of-Service Tag (OOS) – The “CAUTION” OOS tag is to be used only for equipment that has been taken out of service indefinitely. See Energy Isolation (LOTO) Quick Reference Guide (QRG).

Operational Lock – A lock (either keyed or combination) that may be carried and applied by any field personnel for operational purposes only. For example, this may be done to display clearly to any passer-by that a vessel is being bypassed intentionally and shouldn't be put into service without consulting the authorized company representative. Note: Application of an operational lock DOES NOT substitute for a LOTO lock and process.

Proven Isolation – Physical isolation by valves, plugs, or other barrier(s) with verification that the barriers are functioning appropriately.

- Standard double block and bleed
- A valve with double seals that also has a bleed between the valves
- Single block and bleed

Note: Double block and bleed should be used if available.

Qualified Person – One who has received training to identify energy sources and avoid the associated hazards and has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations.

Shall – Denotes a minimum requirement to conform to the Standard. To aid the reader, “shall” requirements are identified in bold. Any deviation from a minimum requirement must be approved via the Standard Exception Form.

Should – Denotes a recommendation, or that which is advised, but not required to conform to the Standard.

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.

Tagout Device – A prominent warning device, such as a durable 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 the tagout device is removed. The tag **shall** be filled out with the attacher’s name and telephone number.

Try (Verify) – Steps taken before starting work on machines or equipment that have been locked or tagged out to verify the system has been de-energized and the energy source(s) is isolated.

4. ROLES & RESPONSIBILITY

HSE DEPARTMENT

- Support supervisors and employees with training and application of this standard.
- Provide technical support with Energy Isolation Procedures and application of associated LOTO.

SUPERVISORS

- Understand the requirements of this standard and ensure compliance.
- Assign Authorized Individual(s) to be trained and manage LOTO activities.

- Assign energy isolation equipment (e.g., locks, tags, and hasps) to Authorized Individual(s).
- Perform annual field validation inspections of Authorized Individuals implementing EIP to verify competency that appropriate LOTO procedures are followed. Document these on the Annual Lockout/Tagout Procedure Inspection Form (Appendix A).
- The **EIP Form** (Appendix C) **shall** be completed for all energy isolation events that do not meet the exemption criteria in Section 5.1. Supervise the removal of a personal LOTO device when the Authorized Individual is not available to remove their device. This **shall** be documented using the **Non-Owner Lock / Tag Removal Form** (Appendix B).

AUTHORIZED INDIVIDUAL(S) / PERSON PERFORMING ENERGY ISOLATION

- Authorized Individuals **shall**:
 - (1) Understand and comply with requirements set forth in this Standard.
 - (2) Be trained to recognize probable sources of hazardous energy, and the actions needed to isolate and control the energy.
 - (3) Inform Affected Individuals of machinery or equipment that will be shut down and isolated to perform the service or maintenance.
 - (4) Maintain locks, hasps, and tags in good working order.
- **Shall** complete the **EIP Form** in Appendix C for all energy isolation events that do not meet the exemption criteria in Section 5.1.
- Identify equipment that should be locked and tagged out prior to servicing/maintenance.
- Perform LOTO as necessary to protect themselves and others.
- Only an electrically Qualified Person may perform LOTO on electrical systems greater than 50 volts.

AFFECTED INDIVIDUAL(S)

- Affected Individuals **shall**:
 - (1) Understand and comply with requirements set forth in this Standard.
 - (2) Be trained in recognition and types of hazardous energy sources, magnitude of energy present at their worksite, and the methods and means for performing energy isolation and control.
 - (3) Communicate with authorized personnel/person performing energy isolation activity regarding planned servicing or maintenance prior to shutdown of machinery or equipment.

5. REQUIREMENTS

The **Energy Isolation Procedure Form** in Appendix C of this standard **shall** be completed for all energy isolation events that do not meet the exemption criteria in Section 5.1. The EIP Form is required for individual and Group energy isolation events.

5.1 EXEMPTIONS

There are situations where LOTO processes (locks, tags, EIP) are not required when isolating equipment for minor service and routine maintenance activities, provided one of the stipulations below is met:

- Servicing/maintenance of electric powered equipment controlled by unplugging a power cord (and the plug remains under the exclusive control of the individual performing the servicing/maintenance) or disconnecting batteries.
- Hot Tap operations with a documented risk assessment and written procedure.

Additionally, it may be necessary to troubleshoot or work on equipment while it is energized. The following are examples:

- Adjusting / tuning engines
- Pigging
- Routine lubrication of pumps and compressors (but does not include couplings on rotating equipment)
- Routine instrumentation and analyzer work
- Routine electrical work performed by, or supervised by, an electrician involving electrical circuits or wiring which need to be energized to properly perform the task, such as electrical preventative maintenance (PMs) such as re-lamping of lights. Note: Provided that capacitors are de-energized.

Note: Business Unit (BU) equipment specific energy isolation procedures shall be implemented.

5.2 LOCKOUT VS TAGOUT

- If an energy isolating device is capable of being locked out, a lock and tag **shall** be used.
- If an energy-isolating device is not capable of being locked out, then a tagout system **shall** be used if it is implemented in a way that achieves a level of protection equal to a lockout system.

*Note: All efforts should be made to affix a lockout device to isolate all energy isolation events that do not meet the exemption criteria in Section 5.1.

5.3 LOCKOUT/TAGOUT PROCEDURES

- Authorized Individuals initiating LOTO **shall** complete the **EIP Form** in Appendix C and have it onsite for the duration of the work and comply with the BU equipment specific LOTO procedures for their area. Minimum procedure requirements include how equipment should be shut down, isolated, blocked, bled, locked out, verified, and returned to service. Isolation points will be identified on the EIP Form.
- Each Authorized Individual **shall** be trained on BU equipment specific LOTO procedures for the equipment they service.

5.4 LOCKOUT/TAGOUT - IDENTIFICATION AND USE

- LOTO devices **shall** be standardized (i.e., color, shape, or size), and **shall** not be used for any other purpose.
- All locks **shall** be accompanied by a tag which identifies the Authorized Individual's name and their contact information. The tag should also clearly state "do not start, do not open, do not close, do not energize or do not operate".
- For energy isolation events which require Group LOTO, one of the following methods **shall** be used: Group LOTO on each isolation point or Group LOTO boxes.
 - **Group LOTO on each isolation point** – Utilizing Group LOTO devices (hasp, cable lock, valve cover, etc.), each Authorized Individual **shall** apply their personal LOTO to every energy isolation point. Each Authorized Individual **shall** remain in control of the keys to their respective LOTO locks at all times. Additional Group LOTO devices **shall** be added to energy isolation points to allow for additional Authorized Individuals to participate in the LOTO when necessary.
 - **Group LOTO boxes** – The primary Authorized Individual (job lead or designee) **shall** LOTO all energy isolation points and place the keys to those locks in a Group LOTO box. **Note: All keys for locks used on the energy isolation points must be placed in the Group LOTO box and shall not be accessible outside the Group LOTO box; including any duplicate keys.** All Authorized Individuals **shall** verify the energy isolation points and apply their personal LOTO to the Group LOTO box (including the primary Authorized Individual). Hasp can be added to the Group LOTO box to allow for additional Authorized Individuals to participate in the LOTO when necessary.
- Group lockout **shall** be documented on the EIP Form.
- Only the Authorized Individual who applied a personal LOTO device **shall** remove it.
- When a person who applied a lock or tag is unavailable to remove the LOTO device, the area manager or lock owner supervisor **shall** be notified. The appropriate manager **shall** complete the steps outlined in the Non-Owner Lockout Tagout Removal process below prior to removal:

- Verify the Authorized Individual who applied the device is not at the location.
- Make reasonable attempts to contact the Authorized Individual.
- Obtain area manager or lock owner supervisor approval to remove device. (Can be verbal)
- Complete the **Non-Owner Lock / Tag Removal Form** in Appendix B prior to removing the LOTO device.
- Ensure the Authorized Individual has been notified that their LOTO device has been removed.
- Specific procedures **shall** be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of Lockout or Tagout Device protection between off going and oncoming employees.

5.5 LOCKOUT/TAGOUT SEQUENCE

1. All Affected Individuals **shall** be notified that servicing/maintenance is required on the equipment and that the equipment must be shut down and locked out to perform the servicing or maintenance.
2. The Authorized Individual **shall** determine the energy hazards associated with the work and how best to isolate the energy.
3. The Authorized Individual **shall** identify isolation and verification points and include them along with all other required information on the **EIP Form** (Appendix C) prior to commencing isolation work.
4. If the equipment is operating, it **shall** be shut down by the normal stopping procedure (depress the stop button, open switch, close valve, etc.).
5. Energy isolating device(s) **shall** be positioned so that the equipment is isolated from the energy source(s). Identify isolation points on the EIP Form.
6. The energy isolating device(s) **shall** be locked and tagged.
7. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or pressure, etc.) **shall** be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. Identify verification points via locks or tags and list each point on the EIP Form.
8. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the normal operating control(s) or by testing to make certain the equipment will not operate.
9. The equipment is now locked/tagged out.

5.6 RESTORING EQUIPMENT TO SERVICE / REMOVAL OF LOCKOUT/TAGOUT

- The Authorized Individual **shall** review the EIP Form and steps taken to install LOTO.
- Authorized Individuals **shall** conduct tests and visual inspections necessary to verify that all non-essential items have been removed and that the machine or equipment components are operationally intact, guards and other controls reinstalled, and the system is ready for reactivation.
- The work area **shall** be checked to ensure that all employees have been safely positioned or removed from the area.
- Controls **shall** be verified to be in the neutral or off position.
- Notify all Affected Individuals that Lockout and Tagout Devices are being removed and the equipment will be ready for use.
- Remove Lockout and Tagout devices. Verify isolation devices and bleeders are returned to normal position and document the verification on the EIP Form.
- Re-energize equipment in accordance with standard operating procedures. Immediately shut down equipment if system is not operating as designed.

6. TRAINING

Expand **shall** provide training to ensure that the Energy Isolation Standard is understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

Training **shall** include the following:

- Authorized Individuals **shall** receive annual training in the recognition of hazardous energy sources and the methods for energy isolation and control.
- Each Authorized Individual **shall** be trained on BU equipment-specific LOTO procedures for the equipment they service.
- Affected Individuals **shall** receive annual training in the purpose and use of energy control procedures.
- All other Expand employees whose work operations may occur in an area where energy control procedures may be utilized must be instructed about the procedure, and about the prohibition regarding attempts to reenergize machines or equipment which are locked out or tagged out.

Re-training **shall** be provided whenever:

- There is a change in job assignments, machines, equipment, or processes that present a new hazard, OR

- When there is a change in energy isolation procedure, OR
- Whenever there is reason to believe there are deviations or inadequacies in the employee's knowledge or use of the energy isolation procedures.

7. AUDIT REQUIREMENTS

Regular audits of this standard and associated procedures may be conducted by the HSER Compliance Assurance Department. Audits **shall** be documented, and corrective actions monitored until they are implemented.

Expand supervisors **shall** conduct an annual field validation with the Authorized Individuals implementing an EIP in their areas of responsibility. The purpose of this field validation is to evaluate the competency of Authorized Individuals and to identify deviations or inadequacies of the procedure used. Field validation **shall** be documented on the **Annual LOTO Procedure Inspection** form in Appendix A.

8. STANDARD EXCEPTIONS

Requirements outlined in this Standard **shall** be followed, unless a Standard Exception is filed on behalf of, and with the approval of the Operations Manager. The Company's **Standard Exception Form** is to be utilized to properly document any exceptions.

9. REFERENCES

- Energy Isolation (LOTO) Quick Reference Guide
- Standard Exception Form
- 29 CFR 1910.147

10. DOCUMENT CONTROL TABLE

Title: Energy Isolation Standard		Document Number: HSER-SAF-EXE-STD-0		
Next Review Date: 2/1/2028				
Originating Department: HSE - Safety				
Version History				
Version	Issue Date	Description	Author(s)	Approved By
1.0	02/11/2025	Integrated heritage companies' LOTO and Energy Isolation documents into a single standard.	Dean Walker, Katie Rhoads	OGB
1.1	4/10/2025	Minor revision to EIP form	Katie Rhoads	Katie Rhoads


11. APPENDICES

- Appendix A – **Annual Lockout/Tagout Procedure Inspection Form**
- Appendix B - **Non-Owner Lock / Tag Removal Form**
- Appendix C – **Energy Isolation Procedure Form (Lockout/Tagout)**

Appendix A – Annual LOTO Procedure Inspection Form

		Annual Lockout / Tagout Procedure Inspection	
Document Number: HSER-SAF-EXE-FRM-003		Effective Date: 01/26/25	
Version Number: 1.0			
Instructions: Perform an inspection of lockout/tagout procedures on an annual basis. The inspection will be performed by a supervisor.			
Date	Business Unit	Location	
Supervisor		Phone	
Equipment/Machine or Description:			
TYPE OF ENERGY THAT IS ISOLATED (CHECK ALL THAT APPLY)			
<input type="checkbox"/> Electrical <input type="checkbox"/> Mechanical <input type="checkbox"/> Hydraulic <input type="checkbox"/> Pneumatic <input type="checkbox"/> Thermal <input type="checkbox"/> Residual Stored Energy <input type="checkbox"/> Chemicals <input type="checkbox"/> Gravity <input type="checkbox"/> Pressurized Liquids/Gases <input type="checkbox"/> Other (List)			
Review the energy control procedure and employee responsibilities with the involved employees and complete the following.			Yes
			No
1. Is the Lockout/Tagout Procedure being followed and used correctly?			
2. Do the involved employees understand their responsibilities under the procedure?			
3. Is a copy of the Equipment Specific Isolation Procedure on location?			
4. Are there any inadequacies in the employees' knowledge, abilities, or use of the procedure?			
5. Does the procedure provide adequate instructions to protect personnel from injury?			
Corrective Action: Address "no" answers by creating and implementing corrective actions. List the corrective actions below.			
Corrective Action	Action Assigned To	Due Date	
AUTHORIZED/AFFECTED PARTICIPANTS (Print names)			
1.	6.	11.	16.
2.	7.	12.	17.
3.	8.	13.	18.
4.	9.	14.	19.
5.	10.	15.	20.
APPROVAL			
Supervisor: (Print)		(Sign)	(Date)
Inspection to be retained for two (2) years.			

Appendix B – Non-Owner Lock/Tag Removal Form

		Non-Owner Lock/Tag Removal Form	
Document Number: HSER-SAF-EXE-FRM-067 Version Number: 1.0		Effective Date: 01/26/25	
General Information			
Date and time of initial request to remove lock:		Lock owner's department:	
Name of lock owner whose lock/tag is to be removed:		Name of lock owner's supervisor:	
Equipment and location:			
Is it necessary for the equipment to be reenergized before the lock owner can return to personally remove the lock? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If "Yes". Explain why:			
Document Reason for Removing Lock: (i.e. Lock owner called in sick, lock owner forgot to remove lock before leaving site, etc.)			
Description of work that took place under LOTO			
Document attempts to contact lock owner prior to removal:			
Date and Time	Method attempted to contact	Result	
Lock Removal:			
<input type="checkbox"/> Verify that the lock will be removed by the lock owner's supervisor or the supervisor's direct designee.			
Lock removed by:		Date and Time lock was removed:	
Notifications:			
<input type="checkbox"/> Verify that lock owner has been informed of lock removal prior to beginning the next shift.			
Signature of Lock Owner's Manager _____			



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ENERGY ISOLATION PROCEDURE FORM LOCKOUT / TAGOUT

Document Number: HSER-SAF-EXE-FRM-068
Version Number: 1.0

Effective Date: 04/10/25
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Area:					
Location:					
Print Name of Authorized Individual Completing Energy Isolation:					
Work to be Conducted:					
Equipment to be Locked/Tagged Out:					
Have Affected Individuals Been Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No					
LOTO Type: <input type="checkbox"/> Individual <input type="checkbox"/> Group					
ENERGY TO BE CONTROLLED (CHECK ALL THAT APPLY)					
<input type="checkbox"/> Electrical <input type="checkbox"/> Mechanical <input type="checkbox"/> Hydraulic <input type="checkbox"/> Pneumatic <input type="checkbox"/> Thermal <input type="checkbox"/> Flammable Gas/Liquids <input type="checkbox"/> Stored Energy <input type="checkbox"/> Chemicals <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure <input type="checkbox"/> Other (specify):					
Isolation Point/Device (Valve, Breaker, Disconnect, Bleeder Valve, etc.)	Isolation Position (On/Off Open/Closed)	Isolation Device		Normal Position (On/Off Open/Closed)	Isolation Device Removed & Returned to Normal Position (Initials)
		Lockout	Tagout		
1		<input type="checkbox"/>	<input type="checkbox"/>		
2		<input type="checkbox"/>	<input type="checkbox"/>		
3		<input type="checkbox"/>	<input type="checkbox"/>		
4		<input type="checkbox"/>	<input type="checkbox"/>		
5		<input type="checkbox"/>	<input type="checkbox"/>		
6		<input type="checkbox"/>	<input type="checkbox"/>		
7		<input type="checkbox"/>	<input type="checkbox"/>		
8		<input type="checkbox"/>	<input type="checkbox"/>		
9		<input type="checkbox"/>	<input type="checkbox"/>		
10		<input type="checkbox"/>	<input type="checkbox"/>		
11		<input type="checkbox"/>	<input type="checkbox"/>		
12		<input type="checkbox"/>	<input type="checkbox"/>		
13		<input type="checkbox"/>	<input type="checkbox"/>		
14		<input type="checkbox"/>	<input type="checkbox"/>		
15		<input type="checkbox"/>	<input type="checkbox"/>		
16		<input type="checkbox"/>	<input type="checkbox"/>		
17		<input type="checkbox"/>	<input type="checkbox"/>		
18		<input type="checkbox"/>	<input type="checkbox"/>		
19		<input type="checkbox"/>	<input type="checkbox"/>		
20		<input type="checkbox"/>	<input type="checkbox"/>		
ENERGY VERIFICATION COMPLETE (TRY!!!)					
List method(s) used to verify that energy sources are isolated, and equipment is safe:					
APPROVALS AND SIGNATURES					
<i>(Verify these precautionary measures have been taken to control hazardous energy prior to servicing and/or maintenance.)</i>					
Authorized Individual Print Name:		Phone:			
Date In:	Time In:	Date Out:	Time Out:		
GROUP LOTO SECONDARY REVIEW					
<i>(Verify that all potential hazardous energy sources have been isolated.)</i>					
Secondary Authorized Individual Print Name:		Phone:			
Date In:	Time In:	Date Out:	Time Out:		
CHANGE OF RESPONSIBILITY (COMPLETE ONLY WHEN TRANSFERRING OWNERSHIP)					
PRIMARY					
Authorized Individual Print Name:		Phone:			
Date In:	Time In:	Date Out:	Time Out:		
SECONDARY					
Secondary Authorized Individual Print Name:		Phone:			
Date In:	Time In:	Date Out:	Time Out:		

