Overview

Purpose

The purpose of this document is to provide the minimum procedures and/or requirements for

- establishing uniform practices for isolating and securing equipment, and
- preventing the release of unexpected or stored energy during servicing and maintenance work.

Scope

The scope of this document applies to all T&L employees, contractors, and guests at facilities owned or operated by T&L.

Out of Scope

This document does not cover servicing and/or maintenance operations that include the following:

- work on cord and plug connected electrical equipment for which energy exposure is controlled by the
  – equipment being unplugged from the energy source, and
  – plug being under the immediate control of the employee performing the servicing or maintenance, or
- hot taps and in-service welds.

Reference: For more information, see the Hot Tap Standard (document).

Training Requirements

Required training associated with this document is covered within each affected employees individual MaraN learn training plan through course [need course number and title] (reference).

Contents

This document consists of the following maps:

- Overview
- Policies
- Life Critical Safety Requirements
- Roles and Responsibilities
- The Process Overview
• Energy Isolation Process
• Annual Auditing Requirements
• Forms
• References
• Documents, and
• Definitions.

Revision History
The table below provides the revision history for this document.

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>Energy Isolation Policy, reformat document.</td>
</tr>
</tbody>
</table>

Policies

Policy for Energy Isolation
This document establishes the minimum requirements for lockout and/or tagout (LOTO) of energy devices in which the unexpected energizing, start up, or release of stored energy could

• cause injury to personnel
• have a negative environmental impact, or
• damage equipment.

Policy for Servicing and/or Maintenance Coverage
Servicing and/or maintenance that takes place during normal operations is covered by this document only if an employee is required to

• remove or bypass a guard or other safety device, or
• place any part of their body into an area, on a machine or piece of equipment, where
  – work is actually performed upon the material being processed (point of operation), or
  – an associated danger zone exists during a machine, equipment, or system operating cycle.

Life Critical Safety Requirements

Life Critical
Energy Isolation work is considered Life Critical.
Safety Requirements

The training associated with this document

- is intended to achieve a high level of policy understanding and execution competency, and
- expects trained employees and contractors to perform according to the procedures in this document.

**Important:** Disregard for Life Critical safety policies and procedures may result in disciplinary action.

Roles and Responsibilities

**Authorized Employees**

*Authorized employees* initiate the Lockout/Tagout (LOTO) procedures who

- have received the required training, and
- are knowledgeable about and can recognize potentially *hazardous energy* sources.

The Process Overview

The table below provides an overview of the energy isolation process.

<table>
<thead>
<tr>
<th>Task</th>
<th>Who is Responsible</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Permit Writer, and&lt;br&gt;• <em>Owning Department</em> (Authorized Employee)</td>
<td>Prepare for Shutdown</td>
</tr>
<tr>
<td>2</td>
<td><em>Owning Department</em> (Authorized Employee)</td>
<td>Notify Affected Employees</td>
</tr>
<tr>
<td>3</td>
<td><em>Owning Department</em> (Authorized Employee)</td>
<td>Shutdown</td>
</tr>
<tr>
<td>4</td>
<td>• <em>Owning Department</em> (Authorized Employee), and&lt;br&gt;• <em>Servicing Personnel</em></td>
<td>Isolation and Placement of Lockout/Tagout (LOTO)</td>
</tr>
<tr>
<td>5</td>
<td><em>Owning Department</em> (Authorized Employee)</td>
<td>Verify Equipment is Isolated</td>
</tr>
</tbody>
</table>
• Servicing Group Representative/Craft Representative, and
• Owning Department (Authorized Employee)  

6  
Perform Work, which may include one or all of the following:
• Transferring Authority
• Temporary Release of LOTO, or
• Shift Change/Job Duty Changes.

7  
• Servicing Group Representative, and
• Owning Department (Authorized Employee)  

• Remove Lockout/Tagout (LOTO) by Authorized Employee who Applied LOTO, and
• Remove Lockout/Tagout (LOTO) by Authorized Employee who did not Apply LOTO.

---

Job Aid
Use the optional “Job Aid” to

• assist in completing the necessary steps to address Energy Isolation issues, and
• be sure that all of the necessary steps for identifying and addressing Energy Isolation work hazards are followed.

Reference: For access to the Job Aid, refer to Energy Isolation Job Aid (document).

---

Energy Isolation Process

Task Overview
The Energy Isolation Process involves the following tasks:

• Task 1: Prepare for Shutdown
• Task 2: Notify Affected Employees
• Task 3: Shutdown
• Task 4:
  – Isolation and Placement of Lockout/Tagout (LOTO) for Owning Department
  – Isolation and Placement of Lockout/Tagout (LOTO) for Servicing Personnel
• Task 5: Verify Equipment is Isolated
• Task 6: Perform Work
• Task 7: Remove Lockout/Tagout (LOTO)
  – By Authorized Employee that Applied the LOTO
  – By Authorized Employee who did not Apply the LOTO

---

Task 1:  
Follow the steps in the table below to prepare for the shutdown.
Prepare for Shutdown

**Responsibility:**
- Permit Writer, and
- *Owning Department (Authorized Employee).*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Responsibility: Permit Writer</strong>&lt;br&gt;Ensure by <em>positive identification</em> the location and contents of all&lt;br&gt;• tanks&lt;br&gt;• piping, and&lt;br&gt;• equipment associated with the work being performed.&lt;br&gt;&lt;br&gt;<strong>Important:</strong> This must be known with certainty before issuing a Work Permit.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Responsibility: Owning Department (Authorized Employee)</strong>&lt;br&gt;Conduct a <em>joint-job site visit</em> with&lt;br&gt;• Supervisors&lt;br&gt;• Operations personnel&lt;br&gt;• Maintenance personnel&lt;br&gt;• Contract personnel, or&lt;br&gt;• other <em>Authorized</em> or <em>Affected personnel</em> as applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Analyze the scope of the maintenance or service project in order to determine all&lt;br&gt;• sources of <em>hazardous energy</em>, and&lt;br&gt;• affected&lt;br&gt;  – equipment&lt;br&gt;  – systems, and&lt;br&gt;  – employees or contractors.</td>
</tr>
<tr>
<td>4</td>
<td>Survey to locate and identify all isolating devices to be certain which&lt;br&gt;• switch(s)&lt;br&gt;• valve(s), or&lt;br&gt;• other <em>EIDs</em> apply to the equipment that needs to be locked or tagged out.</td>
</tr>
<tr>
<td>5</td>
<td>Use <a href="#">LOTO Log Sheet</a> (form) to log the locations of the <em>LOTO Devices</em>.&lt;br&gt;&lt;br&gt;<strong>Important:</strong> Care should be taken to note the location of and status of every isolation point and device.</td>
</tr>
</tbody>
</table>
Task 2: Notify Affected Employees

Follow the steps in the table below to notify the affected employees before the shutdown occurs.

**Responsibility:** *Owning Department (Authorized Employee)*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Notify local operations and all affected employees about the following:  
- a LOTO system is going to be utilized, and  
- the reasons for using the LOTO system. |
| 2    | Document on the LOTO Log Sheet (form) that the notification to local operations has occurred.  
**Example:** Examples of local operations would include  
- MPL Operations Center  
- Terminal personnel  
- Pipeline personnel  
- Refining personnel, or other  
- Company personnel. |

Task 3: Shutdown

Follow the steps in the table below to start the shutdown of the affected equipment.

**Responsibility:** *Owning Department (Authorized Employee)*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Shut down the equipment utilizing shutdown procedures  
**Note:** The person that normally controls the equipment to be isolated should be the person to perform the shutdown unless normal operating procedures are not in effect.  
**Example:** Operating procedures that are not normal are  
- loss of communication, and  
- control equipment failure. |
| 2    | Place the isolating device, such as the  
- valve |
• circuit breaker
• disconnect, and
• so on in the proper position to achieve isolation.

Task 4: Isolation & Placement of LOTO (Owning Department)

Follow the steps in the table below to begin the isolation and placement of the LOTO.

**Note:** Task 4 contains steps for the *Owning Department* and then below is the steps for the *Servicing Personnel*.

**Responsibility:** *Owning Department (Authorized Employee)*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Can LOTO devices be applied to the equipment?  
  • If yes,  
    – Lock and tag each individual *EID* with its own lock and tag.  
    – Place the keys in the group *lock box*.  
    – **Note:** Do not use a single lock and tag for more than one *EID*.  
    – The tag shall contain at a minimum  
       printed name  
       date, and  
       mechanism to identify the *Owning Department* on the tag.  
  • If no, go to Step 2. |
| 2    | Identify tagout *EIDs* that are not capable of being locked out by a specific color coded tag as follows:  
  • use the tag stating *ENERGY SOURCE ISOLATED BY TAGOUT*, and  
  • print the following information on the tag:  
    – name  
    – date, and  
    – type of energy source.  
  **Reference:** See Tagout Systems Special Rules (document) for further guidance |
| 3    | Is there a possibility of re-accumulation of hazardous stored energy?  
  • If yes,  
    – continue verification of effective isolation until the servicing or maintenance is completed, and  
    – confirm that all open bleeders or other devices used to dissipate stored energy are in a de-energized condition. |
Example: Bleeders are open and not plugged and locked and tagged to prevent closing or removal.
- Once verification is completed, go to Step 4.
- If no, go to Step 4.

4 Before starting any actual maintenance or servicing work on the machinery, equipment, or process that has been locked and tagged out, test to verify that the
- equipment is isolated, and
- energy is
  - relieved
  - blocked, or
  - secured.

Task 4: Isolation & Placement of LOTO (Servicing Personnel)

Follow the steps in the table below to begin the isolation and placement of the LOTO.

Note: Task 4 contains steps for the Servicing Personnel and then above are the steps for the Owning Department.

Responsibility: Servicing Personnel

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Verify that each EID
  - is in the proper position, and
  - has been locked and tagged by the Owning department. |
| 2    | Notify all other personnel working on the equipment that a test will be made, and
  - ensure that all other workers are either
    - safely positioned, or
    - removed to prevent potential injury. |
| 3    | Confirm that equipment is isolated, and
  - test to verify that energy is
    - relieved
    - blocked, and
    - secured. |
| 4    | Affix individual lock and an EID tag to the group lock box with your
  - printed name,
  - the date and time, and
  - enter the information on the back of the LOTO Log Sheet (form). |

Note: If so choosing, may also want to affix locks and tags to the
Task 5: Verify Equipment is Isolated

Follow the steps in the table below to verify equipment is isolated.

**Responsibility:** *Owning Department (Authorized Employee)*

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Check that no personnel are in or on the machinery, equipment, or in the surrounding area.  
**Rationale:** Eliminates personnel from being injured by activation of the *energy source*. |
| 2    | Verify the *EID* is isolated by  
• attempting to operate the  
  – start button  
  – switch, or  
  – other normal operating control, and  
• by other testing to ensure that the machinery or equipment does not operate.  
**Important:** Authorized employees must have the required electrical training to perform verification of isolation. It may be necessary to have an electrician perform the verification if it involves working on an exposed conductor. |
| 3    | Recheck all *energy sources* and *lockouts* if the equipment starts when tried.  
**Important:** Do not perform any work on the equipment until a successful *lockout* has been verified. |
| 4    | Document on the *LOTO Log Sheet* (form) that the  
• isolation of the *EID* has been field verified, and  
• the *EID* is ready for *Servicing personnel*. |

Task 6: Perform Work

While performing the actual work any one of the following may occur during the process:

- Transferring Authority
- Temporary Release of LOTO, or
- Shift Change/Job Duty Changes.
**Note:** These situations/conditions are only utilized when required. The detailed steps for each of these conditions are discussed below.

### Transferring Authority

If transferring authority is necessary then follow the steps in the table below to complete this task.

**Note:** This occurs when the Servicing Group/Craft Representative needs to be replaced with a new Servicing Group/Craft Representative because they are no longer associated with the job.

**Responsibility:**
- Initial authorized or new authorized employee as Servicing Group/Craft Representative, and
- **Owning Department (Authorized Employee).**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Servicing Group/Craft Representatives meet at the group lock box with the Owning department representative.</td>
</tr>
<tr>
<td>2</td>
<td>• The new Servicing representative affixes their lock and tag to the group lock box, and&lt;br&gt;• the original Servicing Group/Craft Representative removes their lock and tag.</td>
</tr>
<tr>
<td>3</td>
<td>Document this change in the <strong>Temporary Release/Status Change</strong> section of the <strong>LOTO Log Sheet</strong> (form).</td>
</tr>
</tbody>
</table>

**Notes:**
- If the service/craft lock(s) were removed before the new service group representative locked on the box, then verify the LOTO again, refer to **Task 5: Verify Equipment is Isolated** (block).
- It is **not** necessary to transfer signatures and locks when the Service Group/Craft Representative authority is transferred to a master lock box or next arriving shift.

### Temporary Release of LOTO

If temporary release of a LOTO is necessary then follow the steps in the table below to complete this task.

**Important:**
- There may be instances where equipment that is under LOTO must be temporarily energized for<br>  – alignment<br>  – testing<br>  – positioning, and
– so on.
• Use the temporary release of LOTO procedure to protect personnel from hazardous energy
– when energy needs to be applied to equipment
– before servicing is complete, and
– for purposes of testing and/or troubleshooting.

Responsibility:
• Servicing Group/Craft Representative
• Owning Department, and
• Servicing Personnel.

Note: The table below is broken down by the above responsibility groups.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility: Servicing Group/Craft Representative</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Important:** When it becomes necessary to perform work on energized equipment the Servicing Group
• takes the necessary precautions, and
• utilizes his skills, instruments, training, and safe procedures to prevent exposure to themselves and others. |
| 1 Remove the individual locks from
• the group lockout box so that the owning department can obtain necessary key(s), and
• from any EIDs locked out, which must be energized for testing, positioning, and so on. |
| 2 Remove the individual Energy Source Isolation (ESI) tags from any unlockable EIDs. |
| 3 Remove the Service Group/Craft Representative’s lock from the group lock box and service group. |
| 4 Remove the Service Group ESI tags from the unlockable EIDs, which must be energized. |
| 5 Sign and date the LOTO Log Sheet (form) in the Temporary Release section under Workers Removed. |

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility: Owning Department</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1 Write the following in the Temporary Release section of the LOTO Log Sheet (form):
• a temporary release number beginning with the number one, and
• the reason for the temporary release. |
| 2 Write the corresponding temporary release number in the Temporary Release column beside each affected EID. |
3 Remove the Owner lock from the *group lock box*.

4 • Remove locks and tags from the *EID(s)* points affected by the *temporary release*, and
• place these *EID(s)* in the position required for testing.

5 Sign and date the [LOTO Log Sheet](#) (form) in the *Temporary Release* section in the *Ready for Test* column.

6 Issue or revise the Safe Work Permit to perform testing and/or troubleshooting as authorized by the *temporary release*.

7 When testing/troubleshooting is completed and equipment remains under LOTO do the following:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Return the <em>EIDs</em> to the proper isolated position.</td>
</tr>
</tbody>
</table>
| 2    | Replace the locks and tags if the equipment remains under LOTO.  

*Note*: If the locks and tags are used in the same places as before, the name(s) on the tags do not need to be changed.

3 If returning to LOTO, test to verify that the
• equipment is isolated, and  
• energy is relieved, blocked, or secured.

4 Place the Owner lock on the *group lock box*.

5 Sign and date the [LOTO Log Sheet](#) (form) in the *Temporary Release* section under *Isolation Restored*.

### Shift Change/Job Duty Change
*If a shift change/job duty change occurs during the servicing activity then follow the steps in the table below to complete this task.*
Responsibility:
- *Owning Department*, and
- *Servicing Group*.

**Note:** The table below is broken down by the above responsibility groups.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility: Owning Department</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Transfer the <em>master lock box</em> key to the oncoming <em>owning department</em> employee who is relieving him/her at the end of the shift.</td>
</tr>
<tr>
<td><strong>Result:</strong> The oncoming employee who receives the lock key(s) for the <em>master lock box</em> then becomes responsible for those lockouts.</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibility: Servicing Group</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 2 | Prior to leaving the facility or at the end of the work shift  
- signs off the *LOTO Log Sheet* (form), and  
- enters the time. |
| 3 | Removes his/her individual locks from  
- all *group lock boxes*, and  
- any LOTO *EIDs*. |
| **Notes:**  
- The *Servicing Group/Craft Representative’s* lock and *EID* tag remains on the *group lock box* until the  
  - servicing is complete, or  
  - equipment is returned to the *owning department*.  
- It is not necessary to transfer signatures and locks when the *Servicing Group/Craft Representative’s* authority is transferred to a *master lock box* or next arriving shift. |
| 4 | Before resuming work on an ongoing job, verify the LOTO by  
- reviewing the *LOTO Log Sheet* (form) paperwork, and  
- checking the *group lock box* to ensure that both the Owner and *Servicing Group/Craft Representative* group locks and tags are present. |
| **Note:** If modifications have been made to the paperwork, verify the changes in the field before work resumes. |

**Task 7: Remove**  
Follow the steps in the table below to remove the LOTO when it is by the authorized employee who applied the LOTO.
**LOTO-By Authorized Employee who Applied LOTO**

**Responsibility:**
- *Servicing Group*, and
- *Owning Department*.

**Note:** The table below is broken down by the above responsibility groups.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility: Servicing Group</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1 | Remove the locks and tags from  
  - the lock box, and  
  - any lockout devices when work is completed on the equipment. |
| 2 | Record the removal time in the [LOTO Log Sheet](#) (form). |
| 3 | Verbally communicate the completion of the work to the Owner. |

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility: Owning Department</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1 | Survey and inspect the work area to ensure that everything is safe for start-up, such as  
  - all guards are in place  
  - all tools are removed  
  - everything is clear, and  
  - devices are in the proper operating position. |
| 2 | Check the area around the machines or equipment.  
  **Rationale:** Ensures no personnel are at risk. |
| 3 | Remove all  
  - locks  
  - tags, and  
  - flags. |
| 4 | Activate the *EID* to restore energy to the machine or equipment. |
| 5 | Notify all *affected employees* that the  
  - *LOTO devices* have been removed, and  
  - equipment is ready for operation. |
| 6 | Return the equipment to operation, as needed. |

**Task 7:** Remove LOTO-By Authorized Employee who did not apply the LOTO

The table below describes the process to remove the LOTO if the Authorized Employee who applied the LOTO is *not* available to do so.
did not Apply
LOTO

<table>
<thead>
<tr>
<th>Stage</th>
<th>Who is Responsible</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Authorized Employee desiring to remove the LOTO</td>
<td>Notifies the Supervisor that the LOTO needs to be removed.</td>
</tr>
<tr>
<td>2</td>
<td>Supervisor</td>
<td>• Verifies that the unavailable Authorized Employee is not at the facility, and • makes all reasonable attempts to notify the unavailable Authorized Employee that the device is being removed.</td>
</tr>
<tr>
<td></td>
<td>Note: If prior notification is not accomplished, the unavailable Authorized Employee must be notified as soon as practical and prior to resuming any work at the facility.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supervisor, and Authorized Employee desiring to remove the LOTO</td>
<td>Determines that it is safe to remove the LOTO.</td>
</tr>
<tr>
<td>4</td>
<td>Authorized Employee desiring to remove the LOTO</td>
<td>Removes the LOTO.</td>
</tr>
<tr>
<td>5</td>
<td>Supervisor</td>
<td>• Completes an ALITS report in accordance with the current policy on incident reporting.</td>
</tr>
</tbody>
</table>

**Annual Auditing Requirements (Not Yet in Effect)**

Each Operating Organization shall establish an Auditing Process to require that at least annually, HES personnel in coordination with Owning Department personnel, analyze and trend audit information gathered on the execution of Life Critical work tasks.

This topic outlines the minimum Auditing requirements.

**HES**

Follow the steps in the table below for HES annual review.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
1. Conduct an annual review of Work Permits for Life Critical Work Tasks and associated documents (Lock Out/Tag Out Log Sheets, for example) at each T&L facility.

2. Document the results of the audit on the T&L Life Critical Audit Form (form).

3. Document any gaps identified during the audit on the form.

4. Develop recommendations for improvement for each gap.

5. At the end of the audit, review the findings with Local Operations personnel.

6. Certify the adequacy of the procedures and execution for Life Critical work tasks.

7. Provide the facility with a copy of the audit results.

### Local Operations

The table below describes local operations requirements.

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| A    | Conduct audits of Life Critical Work Tasks through the use of  
|      | • Contractor Performance Audits, and  
|      | • Responsible Employees Promote Safety (REPS) as prescribed  
| B    | Document information from the audits and REPS in SafeAct so  
|      | that it will be available for analysis and trending. |

### Management

The table below describes management requirements.

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| A    | Conduct audits of Life Critical Work Tasks through the use of  
|      | • Task Safety Observations (TSOs) as prescribed in the  
|      | Structured Safety Process (reference), and  
|      | • Contractor Performance Audits (generally conducted in  
|      | conjunction with Leadership Assessments). |
| B    | Document audit information in SafeAct so that it will be  
|      | available for analysis and trending. |

### ES&R/HES&S Manager

Annually, the ES&R/HES&S Manager ensures

- the results of the various audits are compiled, analyzed, trended, and
- action items are identified so they can be communicated to their Organizational Management Team by December 1.
Forms

<table>
<thead>
<tr>
<th>Form</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOTO Log Sheet</td>
<td>LOTO Log Sheet</td>
</tr>
<tr>
<td>T&amp;L Life Critical Audit Form</td>
<td>T&amp;L Life Critical Audit Form (Not Yet in Effect)</td>
</tr>
<tr>
<td>Deviation Approval Form</td>
<td>Deviation Approval Form</td>
</tr>
</tbody>
</table>

References

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
</table>

Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Isolation Matrix</td>
<td></td>
</tr>
<tr>
<td>Lockout Tagout Equipment</td>
<td></td>
</tr>
<tr>
<td>Tagout Systems Special Rules</td>
<td></td>
</tr>
<tr>
<td>Energy Isolation Process – Liquid &amp; Vapor (MPL)</td>
<td></td>
</tr>
</tbody>
</table>
Mud Plug Procedure (MPL)

Energy Isolation Job Aid

Hot Tap Standard

Definitions

Affected Employee An employee whose job requires him/her to

- operate, use, or work in proximity to a machine, equipment, or system on which servicing or maintenance is being performed under lockout or tagout (LOTO), or
- work in an area in which servicing or maintenance is being performed.

Authorized Employee An employee who locks out and/or tags out machines, equipment, or systems in order to perform servicing or maintenance on that machine or equipment.

Example: Vessel Crew, Operations, Maintenance, or Contractor personnel who

- apply locks or tags to the machine or equipment, or
- who are authorized to do so because they are performing servicing or maintenance on the equipment.

Blind The absolute closure of the open end of a pipe, line, or vessel by

- fastening a solid, flat plate (designed to retain the pressure) across the opening, and
- using a gasket and fully engaged bolts or stud bolts in all flange bolt-holes.

Company When used as a proper noun, refers to Marathon Petroleum Company, LLC.

Double Block The closure of a line, duct, or pipe by
and Bleed

- closing and locking two in-line valves, and
- opening and locking a drain or vent line in the line between two closed valves, or
- closing a single double block and bleed type valve and opening the bleeder valve between the valve seals.

<table>
<thead>
<tr>
<th>Energy Isolating Device (EID)</th>
<th>A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• a manually operated electrical circuit breaker</td>
</tr>
<tr>
<td></td>
<td>• a disconnect switch</td>
</tr>
<tr>
<td></td>
<td>• a 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</td>
</tr>
<tr>
<td></td>
<td>• a slide gate</td>
</tr>
<tr>
<td></td>
<td>• a spectacle blind</td>
</tr>
<tr>
<td></td>
<td>• a figure 8 blind</td>
</tr>
<tr>
<td></td>
<td>• valve</td>
</tr>
<tr>
<td></td>
<td>• blind, and</td>
</tr>
<tr>
<td></td>
<td>• mud (bentonite) plug.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Any source of energy, such as</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• electrical</td>
</tr>
<tr>
<td></td>
<td>• radiation</td>
</tr>
<tr>
<td></td>
<td>• mechanical</td>
</tr>
<tr>
<td></td>
<td>• hydraulic</td>
</tr>
<tr>
<td></td>
<td>• pneumatic</td>
</tr>
<tr>
<td></td>
<td>• vapor</td>
</tr>
<tr>
<td></td>
<td>• chemical</td>
</tr>
<tr>
<td></td>
<td>• thermal, or</td>
</tr>
<tr>
<td></td>
<td>• other.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group Lock Box</th>
<th>A job lock box into which all</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>keys for EIDs are placed and then locked with the Owner’s individual lock, and</td>
</tr>
<tr>
<td></td>
<td>Servicing personnel locks are affixed.</td>
</tr>
</tbody>
</table>

| Group | The lockout of a job by using only an Owner lockout device on the EIDs |
Lockout/Tagout (LOTO) involved and then
- placing the keys for the Owner lockout devices in a group lockout box, which the Owner and Servicing representative lock
- locking the group lockout box by each individual Servicing employee, and
- placing this key into the master lock box.

Hazardous Energy An energy source that may cause an injury, such as electrical, mechanical, hydraulic, pneumatic, chemical, thermal, radioactive, or other.

Reference: For additional information, see – Equipment Isolation Matrix (document).

Joint Job Site Visit (JJSV) A meeting between an Owning Department representative and at least one Servicing Group or Work Party Representative of all parties working off of the permit at the specific location where the job will be conducted.

Important:
- The meeting discussion addresses the work scope and safety aspects of the permit.
- The Servicing Group/Work Party Representative attending the JJSV must convey the information covered in the JJSV to all members of their work party.

Lockout The placement of a lockout device and appropriate warning tag on an EID, in accordance with an established procedure, which ensures the EID and the equipment being controlled cannot be operated until the device is removed.

Lockout Device A device that uses a positive means such as a singularly identified lock, locked chain, or cable to
- hold an EID in a safe position, and
- prevent the energizing of a machine or equipment.

Lockout/Tagout (LOTO) Log Sheet A form that documents specific information for the management of LOTO for a given piece or pieces of equipment.

Reference: Refer to the LOTO Log Sheet (form).

MaraLearn An application used to assign, schedule, track, and document individual
employee training. For TT&M, this application is maintained by the Training Administrator located in Operations Support.

---

**Master Lock Box**

The lock box into which the keys from the group lock box(s) are placed and secured.

---

**Owning Department**

The term “owning department” refers to the department that owns and operates process, process-related, and/or utility equipment, machinery, building, and/or systems.

The Owning Department for
- most cases, this is the Region (MPL) and District (TT&M) Operations within MPL and TT&M, or
- the Marine Organization
  - Maintenance owns the Marine Repair Facility, and
  - the Engineer owns Barges.

---

**Plug**

Use of a plug in an open ended pipe is not equivalent to a blind. Take additional precautions when using this type of EID.

**Reference**: For additional information, see – Plugs (document).

---

**Positive Identification**

The process of determining with certainty the location and contents of

- tanks
- piping, and
- equipment before beginning work.

**Note**: This can be achieved through a review of

- applicable drawings, and/or
- by sampling and testing of products in the
  - tank
  - piping, or
  - equipment.

---

**Servicing Group/Work Party**

The people who work on the equipment/process, including

- operations
- maintenance
- contractors
- salaried employees, or
- combination of contractors and salaried employees.

**Note:** These personnel are covered by the work permit.

### Status Change
Any change to the original scope of the LOTO other than those covered by the temporary release.

### Tagout
The placement of a Tagout device on an EID, in accordance with an established procedure, to indicate that the EID and the equipment being controlled may not be operated until the tagout device is removed.

### Tagout Device
A prominent warning device and means of attachment

- which can be securely fastened to an EID in accordance with an established procedure, and
- to indicate that the energy being controlled, may not be operated until the tagout device is removed.

### Temporary Release
When energy must be applied to equipment before servicing is complete for purposes of

- mechanical alignment
- testing, and/or
- troubleshooting.

**Note:** When it becomes necessary to perform work on energized equipment the Servicing group representative must contact

- the Owning department to take the necessary precautions, and
- use his/her skills, instruments, training, and safe procedures to prevent exposure to self and others.

### Records Management
The record retention for this document is:

- Policy, Standard, Procedure or Guideline – General (ACT+10), or