# Lockout Policy: The Control of Hazardous Energy

# 1. Purpose

This policy establishes requirements for the control of hazardous energy through the development and implementation of hazardous energy-isolation Lock-Out and Tag-Out (LOTO) procedures.

# 2. Scope

This policy is applicable when employees and/or contractors are maintaining, installing, removing, modifying or servicing equipment where there is a potential for the release of hazardous energy (active or stored) which may cause injury. The release of hazardous energy may be due to the equipment being energized unexpectedly or as a result of the work being performed on the equipment. Exceptions to this policy are as follows:

- A. Hand-held power tools or stationary equipment whose electrical power may be controlled by the unplugging of equipment from the energy source when the plug and cord are under the control of the individual performing the servicing or maintenance;
- B. Diagnostic work on electrical equipment to troubleshoot, calibrate and/or test (refer to the Electrical Safety Policy).

Note: After the diagnostic process is complete if work requires maintenance, installing, modifying or servicing of equipment an approved LOTO Form 47-199 shall be required. If the diagnostic process is required during a LOTO process, the diagnostic steps shall be included in LOTO Form 47-199.

C. Hot tap operations (stopple system equipment installation and removal operations) involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products when they are performed on pressurized pipeline.

The following are applicable to or referenced in this policy:

Permit to Work	Electrical Safety
Confined Space Entry	Stop Work
Hot Work	Operations Lock Policy

# 3. Minimum Requirements

	Requirements	Supporting Documentation
1.	LOTO Form 47-199 (shall be completed by the LOTO Writer and shall be validated by a USPL Operations Person.	Sections 4, 5, 6, DRM
2.	A Simple LOTO Form 47-199B may be used when a single type of energy source requires isolation and can be isolated with one LOTO lock and tag, (i.e. only one isolation point).	Section 4, 5, 6, Appendix VIII
3.	Flow control butterfly-type valves (non-isolation type) shall not be used for energy-isolation when Primary Source Ignition hot work is part of the work phase covered by the applicable LOTO Form 47-199.	Section 6

4.	Tank inlet and outlet lines (except fire foam lines) shall be blinded where the contents are removed prior to entry. Subsurface fire foam/water injection lines where they are connected to a foam/water source shall be blinded.	Appendix VI
5.	All energy sources associated with equipment to be isolated shall be able to accept or be modified to accept a LOTO lock and be locked in the position that isolates individuals from the hazardous energy when installing, servicing, modifying or performing maintenance on equipment.	Sections 5, 6
6.	The current TL shall review all LOTO Forms 47-199 prior to implementation.	Section 7
7.	The DOM shall approve the use of a LOTO PIC Designee by reviewing and signing LOTO Form 47-199 and LOTO PIC Designee Form 47-199A.	Section 5, Appendix I, II, III
8.	The DOM shall approve LOTO Form 47-199 when Primary Source Ignition Hot Work is part of the work phase and Proven Double Block and Bleed is not achievable.	Section 5, 6, 7
9.	The TL is responsible for the management and retention of the completed LOTO Form 47- 199, Simple LOTO Form, LOTO Inspection Report, LOTO Lock and Tag Cutting Form, and LOTO PIC Designee Forms.	Sections 5, 6, 7, 13, 14, Appendices II, III, IV, V, VIII
10.	The LOTO Person In Charge (PIC) shall be responsible for the overall implementation of each LOTO Form 47-199.	Section 4, 5, 8, 9
11.	Unless a LOTO PIC Designee is used, the LOTO PIC's LOTO locks and tags shall be the first on and last off the identified equipment for individual LOTOs or a lockbox for group LOTOs.	Sections 4, 5, 8, 9, 11
12.	In group LOTO applications, the LOTO PIC shall use the group LOTO equipment tag with their LOTO locks on the equipment's energy isolation devices identified in Section A of LOTO Form 47-199.	Sections 4, 5, 8, 9, 11
13.	USPL employees shall use USPL LOTO locks and tags; contractors may use their own locks but shall use USPL LOTO tags.	Section 4, 8
14.	Each Authorized Person shall apply their individually-keyed LOTO lock and tag to a group lockbox for group LOTO or to each energy-isolation device for individual LOTO.	Sections 4, 5, 8, 9
15.	All LOTO locks and tags for individual and group LOTO situations shall be removed by the person who applied them, except for group LOTO PIC replacement situations.	Sections 4, 5, 8, 9. 11, 12
16.	Group LOTO requires a different type of tag called a Group LOTO Equipment Tag on the isolated equipment that allows the current and replacement LOTO PIC to only remove their LOTO lock and tag from the lockbox if a change in LOTO PIC is required.	Sections 4, 5, 8, 9, 11, 12
17.	All Authorized Persons shall sign and date Section E of the approved LOTO Form 47-199 prior to performing work on equipment listed on the form.	Sections 5, 8, 9 Appendix I
18.	Cutting and removal of LOTO locks and tags shall require the completion and approval of the LOTO Lock and Tag Cutting Form.	Section 13, Appendix IV
19.	A minimum of one LOTO Form 47-199 shall be inspected, for each Inspection Category, per month per team.	Section 14, Appendix V
20.	Hierarchy of Isolation Control shall be applied as indicated in Appendix IX. Deviation approval shall be obtained for any LOTO procedure that cannot achieve the Minimum Isolation Method for the task category as indicated in Appendix IX.	Appendix IX

# 4. Definitions

**Affected Person** – An individual who is responsible for the operation and use of the equipment listed on LOTO Form 47-199 but who is not protected by or performing work under that form. Affected Persons may include people such as Control Center personnel, team leaders, technicians, other contractors on site who are authorized to operate the isolated equipment.

**Authorized Person** – An individual who will be physically working or performing service on the isolated equipment identified on LOTO Form 47-199 or Simple LOTO Form 47-199B. Authorized Persons assure they are protected from the release of hazardous energy by placing their LOTO lock and tag on each energy-isolation device or on the group lockbox which contains the keys to the LOTO PIC's locks that were placed on each energy-isolation device.

**Blind** – An engineered metal device inserted between two flanges or attached to a single flange or piece of equipment to achieve isolation of hazardous energy. It is rated and sized by maximum pressure and pipe diameter and shall have its pressure rating and type stamped on the edge of the blind.

**Controlled Line Break** – A maintenance procedure used to reduce pressure, drain equipment and/or a line segment usually at a flange, and to confirm isolation and de-energization when other means of relieving pressure are not available or practical.

**Craft or Work-Group Lock (PROHIBITED)** – One lock used to protect or represent a group of individuals as opposed to or in conjunction with each individual applying their own individually-keyed LOTO lock and tag.

**Double Block and Bleed (DBB)** – For piping systems, this is the use of two closed block valves or one valve body with two valve seats (e.g., Twin Seal valve) with a bleeder/vent or some other method for relieving pressure and fluid between the valves/valve seats. Closure of two single block valves on one side of the work area without use of vents or drains between the two valves is considered single valve isolation (SVI).

**Drain/Vent Tag** – A yellow colored tag used to identify valves/fittings that are operated to drain or vent a system under a LOTO procedure. The tag shall be labelled with the LOTO Procedure Number and identified as Drain or Vent.

**Energy-Isolation Device** – A mechanical device that physically prevents the transmission or release of energy. Examples of energy-isolating devices include, but are not limited to, the following: manually-operated electrical circuit breaker; disconnect switches; in-line valves; block valves; blinds; stopples; freeze plugs; shielding for nuclear devices; and 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.

Note: Push buttons, selector switches, interlocks, and other control circuit-type devices are not energy-isolating devices.

**Energy Source** – Electrical (including stored/residual/cathodic/induced), chemical, mechanical, hydraulic (liquid product, natural gas or ram), pneumatic (air pressure), radiation, vapor (hydrocarbon vapor), or other energy source that could cause injury.

**Equipment Descriptor** – A statement used in the LOTO Form 47-199 or Simple LOTO Form 47-199B that identifies the equipment and its location. Equipment descriptors are used for equipment which does not have, nor is required to have, an equipment number. A descriptor may apply to the following equipment if it has not been assigned a number: PLCs, drains, vents, stand-alone flanges used for controlled line breaking, and instrumentation.

**Equipment Number** – A number <u>physically-on or affixed-to</u> the equipment that will be used to identify the equipment listed in the LOTO Form 47-199 or Simple LOTO Form 47-199B. A number on the equipment used for another purpose, e.g., P&ID number, LDAR number, inventory number, can be used as the equipment number for LOTO purposes.

**Group Lockout** – A process for controlling the keys to LOTO locks through the use of a lockbox, whereby the LOTO PIC places LOTO locks and group LOTO equipment tags on each piece of equipment identified on LOTO Form 47-199 and then places the keys in a lockbox. The lockbox is closed, and the LOTO PIC's LOTO lock and tag are the first lock and tag secured to the lockbox, after which each Authorized Person attaches his or her own individually-keyed LOTO lock and USPL tag to the lockbox. The LOTO locks and tags shall be removed by the individual who applied them.

**Group LOTO Equipment Tag** – A prominent warning and information tag that contains the name of the LOTO PIC applying the LOTO lock, the date the LOTO lock was applied, and the corresponding LOTO number. <u>This tag shall only be applied on the energy isolating device in a group LOTO situation and not on a lockbox</u>. The USPL-supplied group LOTO equipment tag shall be securely fastened to the LOTO lock (or installed rated blind, OID or electrical equipment AC 0-50V / DC 0-120) in accordance with the sequential steps in Section A of LOTO Form 47-199 to indicate that the equipment being controlled may not be operated until the LOTO lock and group LOTO Equipment tag are removed by the current LOTO PIC.

**Immobilizing Device** – The mechanism used to attach the LOTO lock to the energy-isolating device to secure it in the isolated position. Typical immobilizing devices include chains, hasps, circuit breaker LOTO devices, and fuse cavity LOTO devices.

Note: Plastic chain shall not be used as an immobilizing device.

**Individual Lockout** – A process whereby the LOTO PIC places their LOTO lock(s) and tag(s) on each piece of equipment identified in the LOTO Form 47-199, followed by each Authorized Person placing their LOTO lock and tag on each piece of equipment (a lockbox is not used). The LOTO locks and tags shall be removed by the individual who applied them.

**Live Systems** – Any piping, pipeline or process equipment that contains hazardous materials and is in a normal active or fully ready operational state.

**Lockout** – The placement of a LOTO lock and tag on an energy-isolating or immobilizing device, in accordance with an approved LOTO Form 47-199, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the LOTO lock and tag are removed.

LOTO – An abbreviation for Lock Out and Tag Out.

**LOTO Lock** – A lock (or installed rated blind or OID) that prevents either the energizing of equipment under individual LOTO or the opening of a lockbox under group LOTO. See Appendices VI and VII for USPL LOTO lock and blind requirements.

Note: Contractor LOTO locks shall be individually-keyed or a combination lock where only the Authorized Person knows the combination.

**LOTO Person in Charge (LOTO PIC)** – USPL Operations Person, who can act in an Authorized Person role and is accountable for the implementation of LOTO Form 47-199. This applies to a replacement LOTO PIC when applicable.

**LOTO Person in Charge Designee (LOTO PIC-Designee)** – An individual who performs specific tasks on behalf of the LOTO PIC when it is not practical for the LOTO PIC or may introduce risk to the LOTO PIC. LOTO PIC Designee is only used for specific Right-of-Way and off-shore platform work identified in this policy, reference Appendices I, II, and III.

**LOTO Tag** – A prominent warning and information tag that contains the printed name of the person applying the LOTO lock, the date the LOTO lock was applied, a contact phone number where the person applying the tag can be reached and the corresponding LOTO number. <u>This tag shall only be applied to energy-isolating devices during individual LOTO or on the lockbox for group LOTO</u>. The USPL-supplied LOTO tag shall be securely fastened to the LOTO lock (or installed rated blind, OID or electrical equipment AC 0-50V / DC 0-120), in accordance with the sequential steps in Section A of LOTO Form 47-199. This tag shall not be used on locks applied to energy-isolation devices during group LOTO.

**LOTO Writer** – An individual assigned by the TL/TM to complete Sections A, B and C of LOTO Form 47-199 and who has completed USPL LOTO training.

**Minimum Isolation Requirements**: A single block on each side of the work area and drain to bleed the hazardous energy from the work area. Isolation and complete de-energization of electrical energy from the work area.

Minimum Isolation Method - Appendix IX – Hierarchy of Isolation Control.

**Other Isolation Devices (OIDs)** – other isolation devices such as stopples, freeze plugs, engineered plugs or other non-standard isolation devices that require specific tools or processes to install. Use of OIDs shall be treated as higher risk potential methods that shall require Deviation Approval. Other types of temporary plugs, such as Foreman or Carber plumber's plugs, are not considered OIDs and are intended for non-pressured, vapor control use only.

**Operating Pressure –** the pressure (psig) that is present on the process side of an isolation point from the time of isolation through LOTO duration.

**Operations Lock** – Any lock other than an USPL LOTO lock or a contractor's individually keyed LOTO lock, refer to Section 10.

**Operations Personnel** or **Operations Person** – For the purposes of this policy, a USPL employee who is acting in an operations role for equipment they are authorized to operate or maintain.

**Positive Isolation (PI)** – the most secure method of isolation, achieved by utilizing blinds, blind flanges, disconnection or removal of piping along with blinding, capping or plugging live ends with bolted, threaded or welded fittings. See Appendix VI – Isolated Equipment Utilizing Blinds.

**Proven DBB or SVI Isolation** – A condition whereby valve isolation can be confirmed by Closed and Locked Valves; Drains/Vents are verified clear of blockage and no obstruction (e.g., check valve, relief valve control valve, strainer which could inadvertently prevent flow) shall be between the isolation valve and drain; system de-pressured and drained at point of containment break; confirmed tight valve shut-off and/or no re-accumulation or infiltration of hazardous energy at the point of containment break.

**Simple LOTO** – A LOTO application that does not require the use of LOTO Form 47-199 but shall meet all the conditions and requirements of Section 6.2 and complete Simple LOTO Form 47-199B, reference Appendix VIII.

**Single Valve Isolation (SVI)** – A single block on each side of the work area and drain to bleed the hazardous chemical and hydraulic energy from the work area. Check valves, relief valves or control valves are not to be used as isolation valves.

**Specialized Contractor** – Contractors who maintain USPL equipment at a facility and who provide steps in Section A of LOTO Form 47-199 for the equipment they maintain, including, but not limited to: VRU/VCU, electrical equipment, fire detection and/or suppression systems.

**Tag-Out-Only**– The placement of a LOTO tag as the only means of controlling an energy-isolating device (locks are not used) is prohibited except for use on AC 0-50V / DC 0-120V equipment.

**Validation** – The process where USPL Operations Personnel, who are LOTO trained, confirm that information in the LOTO Form 47-199 (draft or reuse) is correct. An Authorized Person shall confirm that information in a Simple LOTO Form 47-199B is correct.

Verification - Is a process to assure that isolation and de-energization have been accomplished.

**Work Area** – The location(s) identified on the LOTO Form 47-199 in the P&ID, diagram, drawing, sketch, electrical one-line diagram, etc., which shows where work will be performed after the equipment has been isolated and de-energized.

**Zero Energy State** – The safe energy state condition to conduct work which prevents the unexpected release of energy to the work area and does not have the capability of causing harm to employees or environment.

# 5. Roles and Responsibilities

### 5.1. Affected Person shall

- A. Not tamper with any equipment or isolation devices involved in an active LOTO.
- B. Not perform or help perform any maintenance and servicing on equipment identified on LOTO Form 47-199 or isolated by way of the LOTO Form 47-199.

### 5.2. Authorized Person shall

- A. Review LOTO Form 47-199 for understanding with the LOTO PIC prior to working on any equipment listed on LOTO Form 47-199.
- B. Apply their individually-keyed LOTO lock and tag to a group lockbox or to each energy-isolation device for individual LOTO and write the date of when they applied their LOTO lock and tag in Section E of LOTO Form 47-199.

- 1. Have the right to confirm de-energization (i.e., verification) of the equipment listed on the form.
- 2. Document their understanding of Sections A, B and C (if used) by completing Section E.

Note: An Authorized Person may be involved in multiple LOTOs at the same time.

- C. Remove their individually-keyed LOTO lock(s) and tag(s) and write the date of when they removed their LOTO lock and tag in Section E of LOTO Form 47-199, reference Section 8.4.
- D. Conduct validation and complete the Simple LOTO Form 47-199B prior to its use or reuse.

#### 5.3. District Operations Manager (DOM) shall

Note: The term DOM is used throughout this document and is inclusive of the Operation and Maintenance Manager, Area Operations Manager and any other equivalent roles.

- A. Confirm that an annual review is conducted of the previous year's LOTO inspection reports and are accountable for the presentation of the findings and issues to USPL Authorized Persons.
- B. Approve the use of a LOTO PIC Designee by reviewing and signing the LOTO Form 47-199 and LOTO PIC Designee Form 47-199A.
- C. Approve LOTO Form 47-199 where Primary Source Ignition Hot Work is part of the work phase covered by the form and Proven Double Block and Bleed is not achievable.
- D. Approve or seek appropriate approval for Minimum Isolation Method Deviations as indicated in Appendix. IX Hierarchy of Isolation Control.

### 5.4. LOTO Person in Charge (LOTO PIC) shall

- A. Obtain the approved LOTO Form 47-199 from the TL/TM. Confirm it is the appropriate LOTO Form 47-199 for the work to be performed and that it contains current management approval.
- B. Confirm that the equipment numbers and descriptors documented throughout the LOTO Form 47-199 are correct for the equipment involved and that the equipment numbers are physically on the equipment prior to implementation of Section A in the form.
- C. Confirm that a LOTO Form 47-199 that is going to be reused has met all the requirements of Section 7.3 of this policy.
- D. Be responsible for the overall implementation of the LOTO (i.e., follow procedure steps, verifying isolation, de-energization, implementation of specified controls, confirm Zero Energy State prior to work on isolated equipment, maintenance of isolation, interim testing and re-energization).

Note: If the LOTO PIC is not knowledgeable or qualified in the <u>maintenance</u> of the equipment (e.g. VRU/VCU, high energy electrical, fire systems) they may utilize a Specialized Contractor to assist with the isolation, de-energization, verification and re-energization of this equipment.

- E. Determine whether a LOTO PIC Designee is to be utilized. If so, confirm completion of the LOTO PIC Designee Form 47-199A (see Appendices I, II and III). Advise the LOTO Writer to indicate in Section A of LOTO Form 47-199 the steps which the LOTO PIC Designee shall implement. Submit both forms to the appropriate TL/TM and DOM for review/approval.
- F. For individual LOTO situations apply their LOTO locks and tags "first" and remove their LOTO locks and tags "last" from all equipment identified in Section A of the form in their sequentially correct order.
- G. For group LOTO:

Ι.

- 1. For each piece of equipment identified in Section A of the form apply a LOTO lock and group LOTO equipment tag to the equipment's energy-isolation device in sequentially correct order.
- 2. Apply their LOTO lock and tag "first" to the lockbox and remove their LOTO locks and tags "last".
- H. Instruct Affected Persons in the purpose and use of the LOTO and instruction to not attempt to restart or re-energize equipment that is listed in the applicable LOTO Form 47-199.
  - Request the TL/TM to assign an inspector if an inspection is required.

- J. Sign Section D of LOTO Form 47-199 after application of their LOTO locks and tags.
- K. Review the LOTO Form 47-199, face-to-face with all Authorized Persons, at the beginning of the LOTO process and in the course of the LOTO process as new Authorized Persons report to work, prior to the application of the Authorized Person's LOTO lock and tag.
- L. Provide USPL LOTO tags to contractor's employees.
- M. Confirms that each Authorized Person applies their individually-keyed LOTO lock and tag to a group lockbox or to each energy-isolation point for individual LOTO and that Section E of LOTO Form 47-199 is complete
- N. Observe and confirm that interim testing steps as listed in Section A are completed.
- O. Communicate to all Authorized Persons that open pipe (includes instrumentation tubing and product lines) shall not be left unattended. If open pipe cannot be in the visual proximity of site personnel it shall be closed by blinding, installation of engineered caps, threaded plugs or the open pipe reconnected.
  - 1. Plumber's plugs shall not be used for this purpose.
- P. Manage LOTO PIC replacement according to Section 12.
- Q. Confirms that each Authorized Person removes their individually-keyed LOTO lock and tag to a group lockbox or to each energy-isolation point for individual LOTO and that Section E of LOTO Form 47-199 is complete.
- R. Manage the LOTO Lock and Tag Cutting procedure according Section 13 and Appendix IV.
- S. Maintain and be responsible for the active field copy of the LOTO Form 47-199 that contains the completed action steps in Section A and has the signatures in Sections D and E until the LOTO process is completed and equipment returned to final service.
- T. Make "field changes" to an approved LOTO Form 47-199 that is being implemented according to Section 7.
- U. Forward LOTO Form 47-199 to the TL/TM for filing after Section E is completed.

### 5.5. LOTO Person in Charge Designee (LOTO PIC Designee) shall

- A. Only be used for the implementation of LOTO Form 47-199 that involve:
  - 1. Isolation of points on the pipeline right-of-way or in multiple pipeline facilities where the work is performed on the pipeline right-of-way and it is covered by a single form
  - 2. Isolation points at two pipeline stations, where the work is performed at one station and requires isolation at a second station and it is covered by a single form.
  - 3. Isolation points on multiple offshore platforms covered by a single form
  - 4. Isolation points between an onshore location's valve(s) and an offshore platform(s) covered by a single form
- B. Apply and remove LOTO locks and group LOTO equipment tags to and from energy-isolating devices under a group LOTO situation.
- C. Complete only the steps identified for the LOTO PIC Designee on LOTO Form 47-199.

#### 5.6. LOTO Writer shall

- A. Complete USPL LOTO training and be current on their training frequency.
  - 1. Contractors are permitted to be LOTO writers.
- B. Obtain the necessary documents, P&IDs, drawings, electrical one-line diagram and photographs (if needed) to develop a LOTO Form 47-199.
- C. Be responsible for the development of LOTO Form 47-199.

- 1. Use a marked drawing/diagram to review and recommend the Minimum Isolation Method from the Hierarchy of Isolation Control (Appendix IX) requirements to TL/TM.
- 2. In the General Information Section of LOTO Form 47-199, indicate the Task Type, Minimum Isolation Method or Deviation to be applied and approval documentation required as specified in the Hierarchy of Isolation Control (Appendix IX).
- D. Determine if individual or group LOTO will be used for the isolation type to ensure the proper tags are utilized.

### 5.7. Operations Personnel shall

- A. Complete USPL LOTO training and be current on their training frequency.
- B. Conduct validation of draft LOTO Forms 47-199 prior to TL/TM review.
  - 1. A Specialized Contractor shall accompany USPL Operations Personnel performing the validation if they aided in the development of the form (i.e., provided steps in Section A).
- C. Conduct validation of previous approved LOTO Forms 47-199 prior to reuse.
- D. Conduct periodic inspections during the implementation of Section A of LOTO Form 47-199 per Section 14 of this policy.

### 5.8. Operations Team Lead/Terminal Manager (TL/TM) shall

- A. Assign individuals who have completed USPL LOTO training to write the draft LOTO Form 47-199.
  - 1. Approve the use of Contract LOTO Writers and ensure they are trained.
  - 2. Review/select and approve the Minimum Isolation Method or Deviation from the Hierarchy of Isolation Control (Appendix IX) with LOTO writer.
- B. Assign individuals who have completed USPL LOTO training to be a LOTO PIC/LOTO PIC Designee.
- C. Assign a USPL Operations Person who has completed USPL LOTO training to validate the draft LOTO Form 47-199.
  - 1. The person validating the LOTO Form 47-199 shall not be the LOTO Writer, except for Simple LOTO Form 47-199B.
- D. Confirm that all conditions for the use of a Simple LOTO Form 47-199B are met and approve the Authorized Person to perform the Simple LOTO.
- E. Inform the Asset Operator to update the SIMOPS board, LOTO Register and PTW form when a Simple LOTO Form 47-199B is utilized.
- F. Review the validated LOTO Form 47-199 and confirm that it includes the following:
  - 1. The procedure applies the appropriate Minimum Isolation Method from the Hierarchy of Isolation Control (Appendix IX) or the appropriate Deviation.
  - 2. The equipment listed in Section A is the same as the equipment shown in Sections B and C (if applicable).
  - 3. The appropriate sequence-of-steps, in their correct and proper order, is listed in Section A.
  - 4. The work area and the product flow direction arrows are identified and included in Section B.
- G. Consult, if necessary, with the LOTO Writer and other subject matter experts during their review process to confirm that the LOTO steps will achieve the isolation necessary to perform the intended work.
- H. Prior to approval, determine if the Minimum Isolation Methods from the Hierarchy of Isolation Control (Appendix IX) can be met and if they cannot, assign personnel to perform a Level 2 HITRA and accomplish appropriate approvals as indicated in Appendix IX.
- I. Approve LOTO Form 47-199 or Simple LOTO Form 47-199B.

- J. Forward LOTO Form 47-199 for the DOM's approval that involve the following:
  - 1. Primary Source Ignition Hot Work in the work phase that cannot be isolated by Proven Double Block and Bleed,
  - 2. Use of LOTO PIC Designee, or
  - 3. As indicated in Appendix IX, Hierarchy of Isolation Control.
- K. Manage the physical and/or electronic storage of draft and approved LOTO Forms 47-199 and Simple LOTO Form 47-199B. The LOTO Share Point site will still be available and is recommended for electronic storage.

Note: If electronic storage is utilized, the initials of the approver and the date it was approved may be added to the file name to provide a quick reference.

- L. Be accountable for modifying equipment to accept a LOTO lock and tag.
- M. Be accountable for completion of the required number of periodic inspections of LOTO Form 47-199; reference Section 14 & Appendix V.
  - 1. Note: This assignment can be made when the TL/TM is approving the LOTO Form 47-199.
- N. Recommend to the DOM a LOTO PIC Designee.
- O. Designate a replacement LOTO PIC, when applicable.
- P. Be accountable for ordering LOTO locks and tags, and group LOTO equipment tags per the requirements of Appendix VII.
- Q. Review LOTO Lock and Tag Cutting forms and approve the cutting and removal of the LOTO lock and tag per the requirements of Section 13.
- R. Determine if LOTO locks and tags are to be removed and replaced with operation locks, reference Section 10.
- S. Be accountable for forwarding the P&ID(s) and electrical one-line diagram(s) that need to be updated to the appropriate resource.
- T. A TL/TM who has pipeline/terminal Supervisor(s) working for them may assign their LOTO roles, responsibilities and duties to them, through the Delegation of Authority process.

# 5.9. Subject Matter Experts, Technical Authorities, Discipline Leads, Engineers, Project Engineers, Project Managers shall

- A. Provide technical support, as requested by Operations Personnel, in developing and/or reviewing LOTO Form 47-199.
- B. Provide technical support, as requested by Operations Personnel, in assessing new equipment being installed during the work phase and the steps required to be written into the LOTO Form 47-199 for the energization of this new equipment.

# 6. LOTO Form 47-199 Development

### 6.1. Assignment

- A. LOTO requests shall adhere to the Work Management Process.
- B. TL/TM shall assign a LOTO Writer to develop the form.
- C. LOTO Writer obtains the form from the DRM website.

### 6.2. Simple LOTO

A. A Simple LOTO shall meet all of the following requirements:

- 1. Equipment shall have only a single type of energy source which can be readily identified and isolated (e.g. only electrical energy for a rectifier, or only hydraulic energy for a pressure gauge, or only one hydraulic energy source, e.g. product only no additives, for a load head coupler).
  - a) The single electrical energy source shall be less than or equal to 600 volts.
  - b) There shall be no collateral sources of energy in or connected to the equipment.
- A single energy isolation device shall achieve de-energization and isolation to which a single LOTO lock and USPL tag shall be applied. (Tag Out Only allowed for AC 0-50V / DC 0-120V ) Examples of single energy isolation devices are:
  - a) One circuit breaker isolates a rectifier.
  - b) One valve isolates a pressure gauge.
  - c) One valve isolates a load head coupler.

Note: A tank's inlet or outlet valve's pressure/thermal relief valve does not meet this condition because there are two isolation points, upstream and downstream, of the pressure/thermal relief valve.

- 3. Equipment has no potential for stored or residual energy, or the reaccumulation of stored energy after it is shut down which could endanger employees.
- 4. The same Authorized Person shall perform the entire Simple LOTO and the associated work which includes: isolation, de-energization, affixing the USPL LOTO lock and tag, verification of isolation and de-energization, performing the servicing or maintenance, removing their LOTO lock and tag, and re-energizing the equipment.
- 5. The servicing or maintenance on the isolated equipment does not create hazards for other employees.
- 6. Incidents involving the unexpected activation or re-energization of the equipment during servicing and maintenance have not occurred in the past.
- B. LOTO Form 47-199 does not have to be completed for a Simple LOTO.
- C. Simple LOTO procedures are not subject to the LOTO Inspection Process.
- D. The LOTO PIC role is not applicable for Simple LOTO.
- E. TL/TM is authorized to approve the form and shall do so by one of the following methods:
  - 1. Physically signing their name in the "TL/TM Signature" box and physically writing the date in the "Date" box.
  - 2. Use an Electronic Digital Signature with a time and date stamp in the "TL/TM Signature" box.
  - 3. Email their approval to the Authorized Person if they are not physically on site. This email shall be attached to the form prior to implementation.
    - After receiving the TL/TM's email, the Authorized Person prints their name in the "Authorized Person Printed Name on behalf of the TL/TM" box and writes the date in the "Date" box.
- F. If there are no changes on a previously developed form pertaining to the equipment, TL/TM approval and the Authorized Person as confirmed by revalidating it according to the conditions in 6.4.A.1, the form can be immediately reused.
- G. The Simple LOTO shall be documented in the LOTO Register which is a tab in the PTW Policy's Permit Register. All fields will be completed by the Asset Operator but the following modifications apply:
  - 1. The LOTO number in the LOTO Register shall be noted as "Simple LOTO".
  - 2. The LOTO name in the LOTO Register shall be the equipment's number(s) or the equipment's individual name(s) and location(s).

- 3. The LOTO Inspection Category in the LOTO Register shall be marked with "NA".
- H. In Section A of the PTW Form under "Other Applicable Actions, Policies and Procedures" check "LOTO Procedure Box" and write "Simple LOTO" in the "LOTO Number Box".

#### 6.3. Writing

- A. The LOTO Writer shall complete the LOTO Form 47-199, (reference DRM) utilizing the information listed below and in Appendices.
  - 1. Contractors may be LOTO Writers if they are trained in USPL's LOTO policy and LOTO Form 47-199.
    - a) Where Specialized Contractors are used to maintain equipment they may be utilized to assist in the development of the isolation, de-energization, verification to confirm Zero Energy State, maintenance of isolation and de-energization, interim testing and re-energization steps in Section A.
  - 2. For electrical lockouts, i.e. when work will be done on electrical systems, the Writer shall be an electrically Qualified Person.
- B. The LOTO Writer shall confirm the following: the equipment; equipment number or descriptor; the equipment line-up with either a P&ID, drawing, sketch and/or electrical one-line diagram; the equipment and procedural sequence of steps in their proper and correct order in Section A for isolation, de-energization, verification to confirm Zero Energy State, maintenance of isolation and de-energization, interim testing and re-energization.
  - 1. If a P&ID or electrical one-line diagram is found to be inaccurate, it shall be "field corrected" for the use in Section B or a separate line drawing shall be used.
    - a) The LOTO Writer shall forward inaccurate P&IDs and electrical one-line diagrams, with required corrections noted, to the TL/TM so they can be updated.
    - b) The TL/TM is accountable to make the official changes and forward the documents for correction according to USPL-GP-08-0211, Engineering Drawing Maintenance.
  - 2. The LOTO Writer shall assign equipment numbers or equipment descriptors after communicating with the TL/TM for equipment that does not presently have them for the purposes of LOTO (e.g., piping less than two inches, PLC or instrumentation, flanges, vents, etc.).
- C. Flanges involved (e.g. in controlled line breaking or blinding) shall be identified by an equipment number or equipment descriptor that describes their purpose in Section A.

Note: When controlled line breaking/breaking containment is used to achieve and maintain deenergization, the safety considerations and controls shown in Appendix X shall be applied.

- D. To prevent over pressurization of lines, flanges, valves, equipment, etc., that may occur due to LOTO isolation, the venting points need to be included in Section A.
- E. When OIDs are used on equipment to be isolated and de-energized, the writer shall consult with a technician who is competent and has been trained in the installation, operation and use of the OID. The writer shall include in the LOTO procedure the OID equipment (e.g. stopple plugs, TORs, freeze plugs) and the appropriate OID installation steps used to isolate and de-energize a system as well as the appropriate steps to remove OID equipment and re-energize a system that involved use of OID equipment, and Authorized Persons involved with OID installation shall apply their locks to the LOTO PIC Lockbox or individual pieces of equipment prior to installation of the OID.
- F. The "work areas" and "product flow direction arrows" shall be identified on the P&ID(s), line diagrams, drawings, sketches, and/or line sheets used in Section B. Identifying the "work area" can be with a text box and/or color coding with an explanation.
- G. Positive Isolation shall be required when Primary Source Ignition (PSI) Hot Work is part of the work phase covered by the form. If Positive Isolation is not achievable Deviation Approval is required.

- H. Cathodic protection shall be shut off and dissipated prior to opening a tank and may be turned back on when the Clean Tank Certificate is issued. Consult the appropriate Corrosion Specialist for applicable shut off procedures.
  - 1. If flammable material or vapor (coating/painting/product) is present or used for maintenance after the Clean Tank Certificate is issued the Cathodic Protection shall be shut off and deenergized according to the steps in Section A.
- I. Steps to assure isolation and de-energization are maintained shall be included as needed in Section A. These may include:
  - 1. Drain, Vent, Bleed monitoring
  - 2. Isolation verification confirmation
  - 3. Equipment "overnight" positions
  - 4. Management of hydraulic and/or vapor energy re-accumulation
  - 5. Location and number of earthing / grounding devices
- J. If the work under a LOTO involves a cutout and/or disconnecting/reconnecting pipe, valves, equipment, etc., cathodic protection shall be de-energized and bonding systems installed around the work area and/or equipment to be removed and/or replaced. These shall be listed in Section A.
- K. New equipment installed during the work phase or existing equipment reconfigured to affect its function shall have its energization position identified in the re-energizing steps of Section A.
- L. If work on isolated systems involves demolition, permanent decommissioning, or permanently disconnecting, disabling or removing equipment, then a Demolition / Decommission Plan shall be applied. Reference Appendix XI.
- M. Equipment that has been de-energized, subsequently removed, and not replaced shall be noted in the re-energization steps of Section A.
- N. Maintenance or work steps shall not be included in Section A.
- O. Interim testing steps shall be documented in Section A.
  - 1. If the interim test needs to be repeated and the steps are identical, the steps only need to be listed once.
  - 2. Interim testing can occur at any phase of the LOTO, including during the work phase, in which case the re-energizing and de-energizing steps shall be listed.
- P. Photographs are optional and may be inserted in Section C at the discretion of TL/TM and the LOTO PIC.
- Q. If a LOTO PIC Designee is to be utilized, reference Appendix I and have the LOTO PIC complete the forms in Appendices II or III.
- R. Blinding steps shall be included in Section A, reference Appendix VI and X.

### 6.4. Validation

- A. A USPL Operations Person, other than the LOTO Writer, who is trained in the USPL LOTO Policy, shall validate the completed draft of LOTO Form 47-199, or an Authorized Person who develops the Simple LOTO Form 47-199B shall validate it by the following:
  - 1. Physically confirming (i.e. visual/walk down) that the following are correct:
    - a) The General Information Section of the Title Page includes the Task Type, Minimum Isolation Method or Deviation method to be applied per the Hierarchy of Isolation Control and required supporting Deviation documentation and approval levels are indicated.
    - b) The procedure and approval documentation.
    - c) The equipment, its location, and energy magnitude.

- d) Equipment line-up.
- e) Equipment number shall be on a permanent tag attached to the equipment. Apply the tag with a number to the equipment if not present.
- f) Equipment number on the equipment matches the equipment number in Sections A, B and C (if used).
- g) Equipment descriptor in Sections A, B and C (if used) is correct for the equipment.
- h) Equipment and procedural steps shall be sequentially listed in their proper and correct order in Section A for accurate and complete isolation, de-energization, verification to confirm Zero Energy State, maintenance of isolation and de-energization, interim testing and re-energization and that they match the information on the P&ID, drawing, diagram, sketch and/or electrical one-line diagram.
- i) The procedure satisfies the Minimum Isolation Method or Deviation approved by the TL/TM per the Hierarchy of Isolation Control.
- 2. For electrical lockouts, i.e. when work will be done on electrical systems, the Validator shall be an electrically Qualified Person.
- B. The validator shall confirm that all identified energy-isolating or immobilizing devices are able to accept a LOTO lock and tag and notify the TL/TM if this cannot be accomplished.
- C. If a Specialized Contractor is used during the development of LOTO Form 47-199 to provide isolation and de-energization steps, they shall participate in the validation and shall be documented on the form with USPL Operations Personnel.
- D. To minimize the hazard of commuting, more than one USPL Operation Person may be used to validate the draft form when it applies only to the following situations:
  - 1. Right of Way pipeline segments under one LOTO form.
  - 2. Isolation points at two pipeline stations under one LOTO form.
  - 3. Multiple offshore platforms under one LOTO form.
  - 4. An onshore location and offshore platform(s) under one LOTO form.

Note: Each validator's name shall be noted in the General Information Section.

- E. Inaccuracies found by the validation process shall be communicated to the LOTO Writer by the validator.
- F. After the form is revised the validator shall confirm the corrections have been completed.
- G. The validator shall forward the form to the TL/TM for their review and approval after the validation is completed.

# 7. Management Review and Approval Process

The following requirements establish the review and approval authority for field-validated LOTO Form 47-199. USPL Delegation of Authority requirements apply to all LOTO Form Approvals.

### 7.1. TL/TM Actions for LOTO Form 47-199

- A. Shall review validated forms and document their review by entering their name in the "TL/TM Approval" box and the date in the "Date" box on the Title Page of Form 47-199.
- B. Prior to approval, determine if the Minimum Isolation Method Requirements can be met per the Hierarchy of Isolation Control and if they cannot pursue appropriate Deviation requirements.
- C. Authorized to approve forms and shall do so by one of the following methods:
  - 1. Physically sign their name in the "TL/TM Approval" box and physically write the date in the "Date" box on the Title Page.

- 2. Use an Electronic Digital Signature with a time and date stamp in the "TL/TM Approval" box.
- 3. Email their approval to the LOTO PIC if they are not physically on site. This email shall be attached to the Title Page of the form prior to implementation.
- D. Shall sign their name or use their Electronic Digital Signature with a time and date stamp in "TL/TM Approval" box, and forward the forms to the DOM for approval that involve the following:
  - 1. Deviation of Minimum Isolation Method as indicated in the Hierarchy of Isolation Control (Appendix IX).
  - 2. Utilization of a LOTO PIC Designee(s) for Right of Way and Offshore locations as referenced in Appendices I, II, and III.
- E. Accountable for the retention of the approved forms.

### 7.2. DOM Approval for LOTO Form 47-199

- A. Authorized to approve forms that involved the items in 7.1.D by one of the following methods:
  - 1. Physically sign their name in the "DOM Approval" box and physically write the date in the "Date" box on the Title Page.
  - 2. Use an Electronic Digital Signature with a time and date stamp in the "DOM Approval" box.
  - 3. Email their approval to the LOTO PIC if they are not physically on site. This email shall be attached to the Title Page of the form prior to implementation.
- B. Authorized to approve Form 47-199A when a LOTO PIC Designee is utilized as referenced in Appendices I, II and III.

### 7.3. Reuse of LOTO Form 47-199

- A. LOTO PIC shall confirm the following prior to reuse:
  - 1. The procedure is on Form 47-199 and is re-validated as required by Section 6.4.A.1. If there are no changes to the previously approved form as confirmed by re-validating with the items in Section 6.4.A.1, the form can be signed in the General Information Section of the Title page by the Operations Person who performed the re-validation and immediately reused in its original format.
  - 2. If only Title Page General Information Section needs to be updated or changed, the form shall go through the Management Review and Approval process and updated with the current approver and/or General Information Section requirements.
    - a) Documentation of the review and approval shall follow the requirements listed in 7.1 and 7.2 if required.
    - b) The updated General Information Section and/or signatures shall be documented on the Title Page of the most current form contained in DRM for this policy (Form 47-199 and attached to the previously approved procedure on Form 47-199 prior to implementation.
    - c) Note: The remainder of the form may be used in its previous format and does not need to be updated to the most current form.
  - 3. If the changes are other than the Title Page General Information Section, the procedure shall be updated or rewritten depending on the version of Form 47-199 being used as described below. The form shall be validated and go through the Management Review and Approval Process prior to implementation.
    - a) If using the 2013 or newer version of Form 47-199, update the procedure.
    - b) If using a version of Form 47-199 which is prior to 2013, then rewrite the procedure on the most current Form 47-199 in DRM.

### 7.4. Field changes to an approved LOTO Form 47-199

- A. The LOTO PIC may make "field changes" to an approved form that is being implemented if the following requirements are met:
  - 1. Work on isolated equipment is suspended and all Authorized Persons remove their personal lock from the lockbox or single isolating device.
  - 2. The LOTO PIC makes "handwritten" changes to Sections A, B and C (if used) of the form prior to proceeding with the LOTO implementation.
  - 3. Prior to implementing a field change the LOTO PIC validates the change relative to other procedural steps that may be affected and also verifies that isolation and de-energization are maintained.
  - 4. Deviation requirements and approvals are completed as indicated in Appendix IX, including any changes to Level 2 HITRA.
  - 5. The TL/TM grants verbal approval for the change to the LOTO PIC prior to the LOTO PIC implementing the change.
    - a) The DOM's verbal approval shall be required for items in 7.1. D.
  - 6. The TL/TM or DOM sends an email to the LOTO PIC documenting the scope of the change and their approval, and this email is attached to the "handwritten" changed copy of the form by the end of the work shift.

Note: Examples of a change would be a valve identified on the form is not holding and an additional valve needs to be added to the appropriated sections of the form to isolate the line or the requirements for the Minimum Isolation Method selected cannot be met.

- 7. The LOTO PIC completes the appropriate "Field Changes" box on the Title Page of the form and prints the Date & Time of TL/TM and/or DOM approval of Field Changes.
- 8. The LOTO PIC communicates to all Authorized and Affected Persons the changes made to Section A.
- B. If the field change is permanent, a new and current form shall be written, validated and go through the Management Review and Approval Process after the work is completed so it can be reused.
- C. At the completion of the LOTO process, i.e., de-energization & isolation, performing work, reenergization, if no field changes occurred; the LOTO PIC checks the "NA" box for field changes on the Title Page of the LOTO form.

# 8. LOTO Form 47-199 Implementation

### 8.1. Pre Isolation – The LOTO PIC shall

- A. Obtain the approved form from the TL/TM or from electronic storage.
  - 1. Confirm the form is approved, reference Section 7.
- B. Confirm the scope of work is applicable to Section A.
- C. Confirm the procedure is complete and accurate.
- D. Review the form with USPL Operations Personnel and contractors responsible for isolation and/or de-energization of the equipment.
- E. Notify Affected Person(s) that a LOTO will be implemented and on what specific equipment.
- F. Notify the Asset Operator to update the SIMOPs board and Shift Handover Log, if applicable.

### 8.2. Equipment Isolation – LOTO PIC shall

A. Confirm the isolation of the equipment by the proper sequence of steps (i.e., in their correct order of isolation) identified in Section A.

- B. Confirm the equipment numbers are correct in Section A and are physically located on the equipment.
- C. Confirm the equipment descriptors are correct in Section A.

#### 8.3. Equipment De-energization – LOTO PIC shall

A. Confirm that the isolation is proven and all hazardous energy (active, stored or residual) has been de-energized, disconnected or restrained, and rendered non-hazardous in the proper sequence of steps (i.e., in their correct order) identified in Section A and that equipment to be worked on is at Zero Energy State.

Note: Confirmation of de-energization and Zero Energy State requires the LOTO PIC to observe de-energization by means that shall include reading accurate gauges/meters, opening proven obstruction free drains/vents/bleeds, taking measurements or actions to confirm equipment to be worked on is isolated, de-pressured, drained and/or electrically de-energized and relieved of hazardous energy prior to commencing work.

If the isolation cannot be proven or the original Minimum Isolation Method or Deviation approved by the TL/TM cannot be achieved, the LOTO PIC shall not allow work on isolated equipment to progress until the isolation can be proven or additional approvals and controls are implemented as granted and approved by TL and/or DOM.

- B. Drain/Vent Tags shall be applied to equipment used to drain, vent and/or bleed energy from the isolated system and to maintain de-energization.
- C. For electrical lockouts, warnings, or other alerting techniques, shall be affixed to de-energized electrical equipment to indicate it is in a safe state for work, i.e. de-energized or within the lockout procedure scope, and warnings also affixed to adjacent energized electrical equipment to indicate it is not in a safe state for work, i.e. energized or outside the lockout procedure scope. Reference the USPL Electrical Safety Policy or contact the I&E Engineer assigned to the asset for clarity to the requirements.
- D. For withdrawable electrical equipment:
  - 1. If the equipment is capable of being racked to an 'isolated' position such that it can be mechanically secured in that position and subsequently cannot be fully withdrawn from the housing or racked back in, then the lock/tag may be applied to the withdrawable portion, if stated on the isolation plan. Otherwise the lock/tag shall be placed at the location of the isolation and not on the withdrawable equipment.
  - 2. Fuses for switchracks, contactors and PT/CPT applications shall be secured and either chained/cabled together utilizing a LOTO lock or locked in a box to prevent re-installation.
- E. For aerial electrical power distribution isolation points which are not capable of accepting a locking device, the LOTO lock and tag shall be applied to all the entrance points, e.g., substation fence gates, to identify that an isolation point is inside. For substation access restricted to utility access only, only tagging shall be applied to those access gates.

### 8.4. Application of LOTO Lock and Tag and Verification

A. General Requirements – applicable to both Group and Individual LOTO methods

Note: Specific requirements for securing isolation using Group or Individual methods are detailed in Sections B and C below.

Note: The use of a craft or work-group locks shall not be used in USPL LOTO applications.

Note: Operations Locks shall not be used in USPL LOTO applications.

Note: Tag-Out-Only shall not be used to secure energy-isolation in USPL LOTO applications except as allowed for AC 0-50V / DC 0-120V.

1. After the LOTO PIC has placed their locks and tags (per Section B or C below), the LOTO PIC shall review the approved LOTO Form with each Authorized Person before they place their LOTO locks and tags on each energy-isolation device or lockbox.

- a) LOTO tags may be reused.
- b) The writing on the LOTO tags shall be legible for the duration of the LOTO.
- 2. USPL LOTO PIC and/or Authorized Persons shall only use the LOTO locks and tags as referenced in Appendix VII.
- 3. Each contractor in an Authorized Person role shall use their individually-keyed lock (one key for one lock or set of locks for one person) and USPL LOTO tags (supplied by the LOTO PIC).

Note: Contractors may be provided USPL LOTO locks.

- 4. A LOTO tag shall be affixed to the LOTO lock or as close as possible to a blind or OID listed in Section A.
- 5. Prior to initially working on the equipment, the LOTO PIC shall verify equipment isolation and de-energization of the equipment has been accomplished and that it is at Zero Energy State. Verification may be accomplished by but not limited to the following examples:
  - a) Attempting to restart the equipment or system by using the operating controls (e.g., switches, push buttons, etc.) to verify energy isolation and de-energization.
  - b) If no operating controls are present, the equipment shall be checked with the appropriate test instruments (e.g. pressure gauge, volt meter) and/or visual inspection to verify that energy isolation and de-energization has been accomplished.
  - c) Opening low point bleeds, drains, vents and controlled line breaking. Drain/Vent Tags shall be applied to all drains, vents, bleeds used in a procedure.

Note: A Specialized Contractor or Qualified Electrical Individual (working under the direction of the LOTO PIC) may be used to verify isolation and de-energization if the LOTO PIC is not qualified or knowledgeable to perform these tasks.

- 6. The LOTO PIC informs all Authorized Persons they have the right to verify that each piece of equipment involved in Section A has been isolated and they have the right to test the equipment or view the testing for de-energization.
- 7. All Authorized Persons hang their LOTO locks and tags (reference Sections B and C below for individual and group LOTO requirements).
- The LOTO PIC shall confirm that all Authorized Persons have each applied their individuallykeyed LOTO lock and tag to each energy-isolation device (individual LOTO) or lockbox (group LOTO).
- 9. The LOTO PIC shall sign and date Section D of the validated and approved form after all isolation, de-energization and verification steps in Section A are completed.
- 10. Each Authorized Person (e.g., USPL and contractor) shall confirm their understanding of Sections A, B and C (if used) to be utilized by signing Section E and printing the date of when they applied their LOTO lock and tag prior to performing work under the LOTO procedure.
- 11. The LOTO PIC shall confirm that all Authorized Persons have signed and dated Section E.
- 12. If there is a reaccumulation of stored energy to a hazardous level, it is necessary to confirm the accumulation points and take mitigating action until:
  - a) The work is completed, or
  - b) The possibility of such accumulation no longer exists.
- 13. Hasps may be used to accommodate multiple LOTO locks and tags on a lockbox or on individual pieces of equipment.
- 14. As Authorized Persons permanently complete their assignment, they shall remove their LOTO lock and tag and print the date of when they removed their LOTO lock and tag in Section E.
  - a) Each Authorized Person who is returning to work on the isolated equipment may leave their LOTO lock and tag on the individual piece of equipment's energy-isolation device (individual LOTO) or lockbox (group LOTO) for duration of work scope.

- b) If each Authorized Person is returning to work on the isolated equipment and removes their LOTO lock and tag each day, the Authorized Person shall meet with the LOTO PIC each day to review the verification requirements contained in this Section 8.4.
- B. Group LOTO Utilizing a Lockbox
  - 1. The LOTO PIC shall attach a LOTO lock and group LOTO equipment tag on each energyisolating device for the equipment involved in Section A.
  - 2. The LOTO PIC shall confirm that all keys for LOTO locks applied to the energy-isolation devices in Section A have been placed in the lockbox.
  - 3. The LOTO PIC's LOTO lock and tag are placed on the lockbox.
  - 4. Each Authorized Person shall attach their individually-keyed LOTO lock and tag to the lockbox.
    - a) A lockbox shall have sufficient receptacles and/or hasps to accommodate the LOTO locks and tags for all Authorized Persons involved in the LOTO.
- C. Individual LOTO
  - 1. The LOTO PIC shall be the first to attach their LOTO lock and tag on each energy-isolating device for each piece of equipment.
  - 2. Each Authorized Person shall attach their individually-keyed LOTO lock and tag on each energy-isolating device.

#### 8.5. Equipment Released for Work - LOTO PIC shall

- A. Communicate to all Authorized Persons that open pipe (includes instrumentation tubing and product lines) shall not be left unattended. If open pipe cannot be in the visual proximity of site personnel it shall be closed by blinding, installation of engineered caps, threaded plugs or the open pipe reconnected.
  - 1. Plumber's plugs shall not be used for this purpose.
- B. Informs the Asset Operator to enter the LOTO information into the LOTO Register after all steps in Section A that pertain to isolation, de-energization and verification are complete.
- C. Releases the equipment protected by the LOTO procedure for Authorized Persons who have signed and dated Section E to commence work.
- D. Assure isolation, de-energization and Zero Energy State are maintained throughout the duration of the work phase.
  - 1. Maintain drains, vents, and bleeds to manage potential hydraulic and/or vapor energy reaccumulation.
  - 2. Re-check isolation integrity daily prior to beginning work on an isolated system.
  - 3. Manage re-accumulation of hazardous energy to a safe level as indicated in Level 2 HITRA or other approved/accepted control practice or process.
  - 4. Re-verify de-energized conditions as needed or as specified in Section A of the procedure or Level 2 HITRA.
- E. Confirms Interim Testing during the work phase, see Section 9.
- F. A copy of relevant sections of the equipment lockout procedure, e.g., Title Page, Section A (Procedure), and Section B (PIDs or Drawings) of Form 47-199, shall be available with the PTW at the work site for as long as the isolation is in place.

## 9. Interim Testing

### 9.1. General Requirements

A. At the point where equipment is isolated, de-energized and released for work, if it is required that LOTO locks and tags be temporarily removed from the energy-isolating devices for the purposes of interim testing (e.g., testing rotation of pumps, MOVs, electric motor(s), VRU/VCU, testing integrity of Cathodic Protection System, venting strainers with hydraulic energy to remove air) each step of re-energization and de-energization shall be sequentially listed in their proper order of isolation in Section A of LOTO Form 47-199 by the LOTO Writer (see required steps in 9.2 below).

### 9.2. Performing Interim Testing

- A. Prepare for re-energizing.
  - 1. The LOTO PIC shall confirm that the correct isolated equipment is identified for interim testing and re-energizing.
  - 2. All work applicable to the specific LOTO Form 47-199 is stopped.
  - 3. The LOTO PIC shall notify all Authorized and Affected Persons of the specific equipment that will be re-energized.
- B. Remove LOTO Locks and Tag(s).
  - 1. Each Authorized Person shall remove their LOTO lock and tag from either the lockbox (group LOTO) or applicable equipment (individual LOTO) involved in the interim test and sign/date Section E of LOTO Form 47-199.
  - 2. LOTO PIC shall confirm that all Authorized Persons have removed their LOTO locks and tags.
  - 3. LOTO PIC shall be the last person to remove LOTO lock(s) and tag(s) as follows:
    - a) Individual LOTO Their LOTO lock(s) and tag(s) from equipment to be re-energized for interim testing
    - b) Group LOTO Their LOTO lock and tag from the lockbox and LOTO lock(s) and group LOTO equipment tag(s) from the equipment to be re-energized for interim testing.

Note: LOTO PIC shall leave / replace the LOTO keys from equipment that is not affected by interim testing in the lockbox and secure with the LOTO PIC LOTO lock and tag.

- 4. LOTO PIC shall confirm energy-isolation devices, bleed points, spigots, etc., are in the correct position, as specified in Section A of LOTO Form 47-199, that are necessary to conduct the interim test.
- C. Perform Interim Test Do not list the work steps
- D. Post Interim Test Isolation and De-energization of Equipment-Group LOTO
  - 1. After the interim test is complete the LOTO PIC shall:
    - a) Confirm the return of the energy-isolation device(s), bleed points, spigots, etc. to the correct position per Section A of LOTO Form 47-199.
    - Apply their LOTO lock(s) and the group LOTO equipment tag(s) to each energy-isolating device for the equipment that was involved in the interim testing per Section A of LOTO Form 47-199.
    - c) Verify that the equipment is isolated and de-energized.
  - 2. LOTO PIC shall take their LOTO lock and tag off the lockbox and reinsert the keys that were removed for the interim test back into the lockbox.
  - 3. LOTO PIC shall reinstall their LOTO lock and tag on the lockbox.
  - 4. The LOTO PIC shall inform all Authorized Persons they have the right to verify that each piece of equipment involved in Section A of LOTO Form 47-199 has been isolated and they have the right to test the equipment or view the testing for de-energization.
  - 5. All Authorized Persons shall reattach their LOTO lock and tag on the lockbox and sign/date Section E of LOTO Form 47-199.

- 6. The LOTO PIC shall inform all Affected Persons that Section A of LOTO Form 47-199 will be reimplemented and on what specific equipment.
- 7. After isolation, de-energization, and verification the LOTO PIC informs all Authorized Persons that work can commence.
- E. Post Interim Test Isolation and De-energization of Equipment-Individual LOTO.
  - 1. After the interim test is complete the LOTO PIC shall:
    - a) Confirm the energy-isolation device(s) and bleed points, spigots, etc., have been returned to the correct position, as specified in Section A of LOTO Form 47-199.
    - b) Apply their LOTO locks and tags to each energy-isolation device for the equipment involved in the interim testing.
    - c) Verify that the equipment is de-energized as specified in Section A of LOTO Form 47-199.
  - 2. All Authorized Persons shall reattach their individual-keyed LOTO locks and tags to each energy-isolation device and sign/date Section E of LOTO Form 47-199.
  - 3. Each Authorized Person shall verify isolation and de-energization of the equipment.
  - 4. The LOTO PIC shall inform all Affected Persons that Section A of LOTO Form 47-199 will be reimplemented and on what specific equipment.
  - 5. After isolation, de-energization, and verification the LOTO PIC informs all Authorized Persons that work can commence.

# 10. Operations Locks

A. LOTO locks and tags may remain on the equipment while work is not being performed for short duration periods, e.g., such as waiting for parts or equipment repair.

Note: Reference the Operational Locks Policy for Assets isolated for long duration or removed from Service that is applicable to your facility.

# 11. Final Re-energization of Equipment to Service

- A. The LOTO PIC shall inspect the work area to confirm that equipment, tools and materials have been removed and that equipment components are operationally intact.
- B. For Group LOTO applications:
  - 1. Each Authorized Person removes their LOTO lock and tag and dates Section E of LOTO Form 47-199.
  - 2. LOTO PIC removes their LOTO lock and tag from the lockbox(s).
  - 3. LOTO PIC then removes their LOTO lock(s) and group LOTO equipment tag(s) from the individual pieces of isolated equipment in their proper sequence.
- C. For Individual LOTO applications:
  - 1. Each Authorized Person removes their LOTO lock(s) and tag(s) and dates Section E of LOTO Form 47-199.
  - 2. LOTO PIC removes their LOTO locks and tags from all individual pieces of equipment in their proper sequence.
- D. The LOTO PIC shall confirm that all individuals have been safely positioned or removed from the work area prior to re-energization.
- E. The LOTO PIC shall inform all Affected Persons that the LOTO locks have been removed and reenergization of the equipment may commence.

- F. The LOTO PIC shall notify the Asset Operator that LOTO Form 47-199 is completed and to update the LOTO Register, SIMOPs board and Shift Handover Log.
- G. After the work is complete, the LOTO PIC shall forward the completed LOTO Form 47-199 to the TL/TM and the form shall be retained for one year from the date of issue or until the DOM annual meeting is held.

# 12. LOTO PIC Replacement

The replacement LOTO PIC, designated by the TL/TM, is accountable for maintaining the LOTO Form 47-199 from the point of departure of the original/previous LOTO PIC.

### 12.1. Group LOTO utilizing a Lock Box

- A. If a LOTO PIC is replaced the following sequence shall occur:
  - 1. The incoming LOTO PIC reviews for understanding the LOTO Form 47-199 with the outgoing LOTO PIC.
  - 2. The outgoing LOTO PIC has a verification discussion with the incoming LOTO PIC.
  - 3. The incoming LOTO PIC applies their LOTO lock and tag to the lockbox.

Note: The lockbox should have a LOTO hasp attached to accommodate multiple LOTO PIC locks.

- 4. The outgoing LOTO PIC removes their LOTO lock and tag from the lockbox.
- 5. The incoming LOTO PIC informs all Authorized Persons of the change.
- 6. The new LOTO PIC signs Section D1 of LOTO Form 47-199 in the replacement LOTO PIC box.

### 12.2. Individual LOTO

- A. If a LOTO PIC is replaced the following sequence shall occur:
  - 1. All work covered by the LOTO Form 47-199 shall stop because there can only be one LOTO PIC for multiple pieces of equipment.
  - 2. The incoming LOTO PIC reviews for understanding the LOTO Form 47-199 with the outgoing LOTO PIC.
  - 3. The outgoing LOTO PIC has a verification discussion with the incoming LOTO PIC.
  - 4. The incoming LOTO PIC places their LOTO lock and tag on the equipment's energy-isolating device before the outgoing LOTO PIC removes their LOTO lock and tag from the same energy-isolating device.
  - 5. The incoming LOTO PIC informs all Authorized Persons of the change.
  - The new LOTO PIC signs Section D1 of LOTO Form 47-199 in the replacement LOTO PIC box.

# 13. Cutting and Removal of a LOTO Lock and Tag

**13.1.** Each LOTO lock and tag shall be removed by the Authorized Person who applied the LOTO lock and tag except when a LOTO PIC is replaced when it pertains to the use of the Group LOTO Equipment Tag. If the Authorized Person who applied the LOTO lock and tag is not available to remove it and efforts to contact that person or their supervisor have failed, that LOTO lock and tag shall be cut in accordance with the requirements listed below and Appendix IV:

- A. The LOTO PIC shall complete the LOTO Lock and Tag Cutting Form and forward it to the appropriate TL/TM for approval.
- B. The TL/TM shall review the form with the LOTO PIC and can approve the cutting of LOTO lock and tag.

Note: Approval via signature, phone or by email is acceptable. The email approval shall be attached to the form.

- C. The LOTO PIC shall forward the completed form to the TL/TM. The TL/TM shall retain the form until after the DOM convenes the annual meeting(s) with USPL Authorized Persons to review the findings of LOTO inspections performed during the year within their area of responsibility. The information on the LOTO cutting form may be needed for the review.
- D. The LOTO Lock and Tag Cutting Form is not required if the Authorized Person, presently working at the site, loses their LOTO Lock key and cuts their LOTO Lock under the direction of the LOTO PIC.
- E. LOTO locks and tags that are cut off shall not be retained.

# 14. Periodic Inspections of LOTO Form 47-199 Implementation

### 14.1. Frequency and Number of Inspections

A. One LOTO procedure implemented per month per team shall be inspected. If there are no LOTO's implemented in a month, then there are no requirements to perform an inspection that month.

### 14.2. LOTO Inspection Personnel

A. The individual performing the LOTO inspection shall be an Authorized Person(s) not utilizing the LOTO at the time of the inspection.

### 14.3. LOTO Inspection Requirements:

- A. The procedure shall be inspected from start to finish (i.e., from de-energizing through reenergizing) to ensure that it is accurate, correctly followed and provides appropriate protection.
  - It is acceptable for different LOTO inspection personnel to inspect parts of the procedure (i.e. one person may inspect the de-energizing sequence, and another person may inspect the reenergizing sequence).
    - a) If multiple LOTO inspection personnel are used to inspect the procedure they shall be identified on the inspection documentation and it shall note which part of the inspection they conducted.
- B. The LOTO inspector shall:
  - 1. Interview a minimum of one Authorized Person to review their understanding of their responsibilities under the procedure. Additional Authorized Persons can be interviewed at the Inspector's discretion.
  - 2. Immediately inform the LOTO PIC or Authorized Person(s) of any deficiencies in Section A or in its implementation.
  - 3. Use the LOTO Field Inspection Checklist from the COW Audit Assurance Form (Appendix V) to accomplish the inspection.
  - 4. Review the results of the inspection with the TL/TM.
  - 5. Complete the LOTO Field Inspection Checklist and forward to the TL/TM.
    - a) TL/TM shall enter the inspection results in the LOTO Tab of the COW Audit Assurance Entry Form.

- b) TL/TM shall assure any deficiencies or inadequacies identified in the inspection are appropriately corrected and/or addressed.
- C. The DOM shall assure an annual meeting(s) of USPL Authorized Persons occurs and the findings of LOTO inspections performed during the year within their area of responsibility are reviewed.
  - 1. Attendance at the annual meeting should be appropriately documented.

# 15. Third Party LOTOs

- A. When a 3<sup>rd</sup> party commissions work (pays for it) that involves isolation of USPL equipment, USPL Operations Personnel shall isolate the equipment as identified in the 3<sup>rd</sup> party LOTO procedure and secure with a USPL Operations Lock.
- B. When USPL commissions work involving 3<sup>rd</sup> party equipment, the 3<sup>rd</sup> party is responsible for isolating their equipment. USPL's LOTO policy shall then be followed including the application of USPL LOTO locks and tags on the 3rd party equipment.

# 16. LOTO Lock and Tag Ordering and Specifications

A. See Appendix VII "LOTO Lock and Tag Order Form and Information".

# **17. Training and Competency**

A. USPL Operations Personnel, Authorized Persons, LOTO PICs, LOTO PIC-Designees, LOTO Writers/Validators, TL/TM and DOMs shall be trained for their roles. LOTO Writer/Validators and LOTO PICs shall also be certified in their role.

Note: Refer to the USPL Control of Work Training and Competency Matrix for specific training requirements.

B. Contractors shall provide verification prior to the start of work that Authorized Persons have been trained in their company's LOTO program that complies with OSHA Standard 29 CFR 1910.147.

# 18. References

- ASME B16.48 "Line Blanks"
- BP Group Engineering Technical Practice GP 35-20
- BP Group Standard Personal Safety Control of Work (CoW)
- BP OMS Guide Permit to Work
- OSHA STD 1-7.3 Control of Hazardous Energy (Lockout/Tagout) Inspection Procedures and Interpretive Guidance.
- OSHA 29 CFR 1910.119 (f) (4) Process Safety Management of Highly Hazardous Chemicals.
- OSHA 29 CFR 1910.146 Confined Space Entry Standard.
- OSHA 29 CFR 1910.147 Control of Hazardous Energy (Lockout/Tagout).
- OSHA 29 CFR 1910.269 Electric Power Generation, Transmission and Distribution Standard.
- OSHA 29 CFR 1910.333(b) Electrical Safety Related Work Practices.
- NFPA 70E Standard for Electrical Safety in the Work Place

# Appendix I LOTO PIC Designee

#### 1. General

- 1.1. The purpose of the LOTO PIC Designee is to perform specific tasks on behalf of the LOTO PIC who is responsible for the overall implementation of the LOTO Form 47-199 in instances where it is not practical or may introduce risk for the LOTO PIC to travel to equipment involved in the implementation of LOTO Form 47-199.
- 1.2. The requirements listed below are specific to the use of a LOTO PIC Designee. Additional requirements for the implementation of a LOTO Form 47-199 (i.e. the LOTO PIC's responsibilities) are applicable and are detailed in Section 8 of this policy.
- 1.3. The use of a LOTO PIC Designee shall only be permitted for the implementation of LOTO Form 47-199 involving the following:
  - 1.3.1.Isolation of points on the pipeline right-of-way that may also involve isolation in one or more pipeline facilities where the work is performed on the pipeline right-of-way and it is covered by a single form.
  - 1.3.2.Isolation points at two pipeline stations, where the work is performed at one station and requires isolation at a second station and it is covered by a single form.
  - 1.3.3.Isolation points on multiple offshore platforms that are covered by a single form.
  - 1.3.4. Isolation points between an onshore location's valves and offshore platform(s) covered by a single form.

#### 2. Pre Isolation of Equipment

- 2.1. LOTO PIC shall be responsible for completion of the LOTO PIC Designee Form 47-199A.
- 2.2. The LOTO PIC shall review steps on the approved LOTO Form 47-199 that apply to the LOTO PIC Designee and identify any that involve the sequential interaction of the LOTO PIC and LOTO PIC Designee prior to implementation.
- 2.3. Communication steps between the LOTO PIC and LOTO PIC Designee roles shall be included in Section A of LOTO Form 47-199.
  - 2.3.1.As one role completes their sequence of steps, a communication occurs prior to the other role beginning their sequence of steps (e.g., LOTO PIC implements steps 1 through 4, communicates to LOTO PIC Designee(s) so they can implement their steps 5 through 8, LOTO PIC Designee completes steps 5 through 8 and informs LOTO PIC they are completed).
- 2.4. The TL shall designate a LOTO PIC Designee by one of the following:
  - 2.4.1.Physically signing their name in the "TL Signature Box" and physically writing the date in the "Date Approved" box on the Title Page.
  - 2.4.2. Using an Electronic Digital Signature with a time and date stamp in the "TL Signature Box".
  - 2.4.3.Emailing their approval to the LOTO PIC if they are not physically on site. This email shall be attached to the LOTO PIC Designee Form 47-199A prior to implementation.
    - 2.4.3.1. After receiving the TL's email, the LOTO PIC physically signs and dates the LOTO PIC Designee Form 47-199A in the "LOTO PIC Physical Signature on behalf of the TL" box.
- 2.5. The LOTO PIC Designee Form 47-199A and the applicable LOTO PIC Designee steps noted in Section A of LOTO Form 47-199 shall be approved by the DOM.
- 2.6. DOM is authorized to approve the form and shall do so by one of the following methods:
  - 2.6.1. Physically signing their name in the "DOM Signature Box" and physically writing the date in the "Date Approved" box on the Title Page
  - 2.6.2. Using an Electronic Digital Signature with a time and date stamp in the "DOM Signature Box".

- 2.6.3.Emailing their approval to the LOTO PIC if they are not physically on site. This email shall be attached to the LOTO PIC Designee Form 47-199A prior to implementation.
  - 2.6.3.1. After receiving the DOM's email, the LOTO PIC physically signs and dates the LOTO PIC Designee Form 47-199A in the "LOTO PIC Physical Signature on behalf of the DOM" box.
- 2.7. The LOTO PIC Designee shall only perform the steps in their sequential order as identified for the LOTO PIC Designee in Section A of LOTO Form 47-199.
- 2.8. If Authorized Persons perform work at the LOTO PIC Designee's location, the LOTO PIC Designee shall be a USPL employee or a contractor who is an approved Asset Operator Designee trained in USPL LOTO Policy. The LOTO PIC Designee shall:
  - 2.8.1. Obtain an approved copy of LOTO Form 47-199 from the LOTO PIC prior to implementation.
  - 2.8.2. Review the LOTO Form 47-199 with all Authorized Persons responsible for isolation and/or deenergization of the equipment in the LOTO procedure.
  - 2.8.3.Confirm the scope of work is applicable to the information on LOTO Form 47-199.
  - 2.8.4.Notify Affected Person(s) that an implementation of LOTO Form 47-199 will be performed and on what specific equipment.
  - 2.8.5. Notify the Asset Operator to update the SIMOPs board and Shift Handover Log, if applicable.
- 2.9. If Authorized Persons are not to perform work at the LOTO PIC Designee's location, the LOTO PIC Designee may be a contractor who is qualified to operate the equipment.

#### 3. Equipment Isolation – LOTO PIC Designee shall:

- 3.1. Confirm the equipment numbers are correct and are physically located on the equipment at their respective locations.
- 3.2. Confirm the equipment descriptors are correct for the equipment at their respective locations.
- 3.3. Confirm the isolation of equipment by the sequence identified on LOTO Form 47-199.

#### 4. Equipment De-energization – LOTO PIC Designee shall:

- 4.1. Confirm that all hazardous energy (active, stored or residual) has been de-energized, disconnected, or restrained, and rendered non-hazardous in the sequence identified on LOTO Form 47-199.
  - 4.1.1.Note: Confirmation of de-energization may require the LOTO PIC Designee to witness and observe deenergization (e.g., watching a pressure gauge drop to zero).
- 4.2. If there is reaccumulation of stored energy to a hazardous level, it is necessary for the LOTO PIC Designee to confirm the accumulation points and take mitigating action until:
  - 4.2.1.The work is completed, or

4.2.2. The possibility of such accumulation no longer exists.

#### 5. Application of LOTO Lock and Tag and Verification

- 5.1. The LOTO PIC Designee shall apply their LOTO locks and group equipment LOTO tags on the equipment's energy-isolation devices per the steps identified for the LOTO PIC Designee in Section A of LOTO Form 47-199.
- 5.2. Prior to working on the equipment, the LOTO PIC Designee shall verify equipment isolation and deenergization of the equipment has been accomplished. Examples of verification methods are listed below, but are not limited to the following:
  - 5.2.1.Attempting to restart the equipment or system by using the operating controls (e.g., switches, push buttons, etc.) to verify energy isolation and de-energization,
  - 5.2.2.If no operating controls are present, the equipment shall be checked with the appropriate test instruments (e.g. pressure gauge, volt meter) and/or visual inspection to verify that energy isolation and de-energization has been accomplished,
  - 5.2.3. Opening low point bleeds, drains, vents and controlled line breaking.

5.2.4.Note: A Specialized Contractor or Qualified Electrical Individual (working under the direction of the LOTO PIC) may be used to verify isolation and de-energization if the LOTO PIC is not qualified or knowledgeable to perform these tasks.

#### 6. <u>Control of LOTO PIC Designee Keys for Implementation of LOTO Form 47-199 and LOTO PIC Designee</u> <u>Form 47-199A - Right of Way</u>

- 6.1. The LOTO PIC Designee is used to isolate and de-energize on behalf of the LOTO PIC and shall give their energy isolation device LOTO lock keys to the LOTO PIC. The LOTO PIC places the keys in the LOTO PIC's lockbox and secures it with their LOTO lock and tag prior to the start of work.
- 6.2. The LOTO PIC Designee shall apply their LOTO lock and tag to the LOTO PIC lockbox.
- 6.3. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title LOTO PIC Designee Energy Isolation, De-energization and Verification.
- 6.4. The LOTO PIC shall print and sign their name and date Form 47-199A under the title LOTO PIC Securing of Isolation.
- 6.5. If an Authorized Person(s) performs work at the location(s) where a LOTO PIC Designee(s) is utilized, an additional lockbox(s) shall be utilized at the location where the work is to be performed.
  - 6.5.1.The LOTO PIC Designee shall give their energy isolation device LOTO lock keys to the LOTO PIC. The LOTO PIC places the keys in the LOTO PIC's lockbox and secures it with their LOTO lock and tag prior to the start of work.
  - 6.5.2. The LOTO PIC Designee shall apply their LOTO lock and tag to the LOTO PIC lockbox.
  - 6.5.3. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title LOTO PIC Designee Energy Isolation, De-energization and Verification.
  - 6.5.4. The LOTO PIC shall print and sign their name and date Form 47-199A under the title LOTO PIC Securing of Isolation.
  - 6.5.5.LOTO PIC Designee key(s) from their lock(s) on the LOTO PIC lockbox is transported and placed in a lockbox at the LOTO PIC Designee's location.
  - 6.5.6.LOTO PIC Designee shall place their LOTO lock and tag on the lockbox at their location.
  - 6.5.7.Authorized Person(s) at the LOTO PIC Designee's location shall place their LOTO lock(s) and tag(s) on the LOTO PIC Designee's lockbox.
    - 6.5.7.1. Note: The above steps demonstrate the process of "daisy-chaining" of lockboxes.
  - 6.5.8. The LOTO PIC Designee informs all Authorized Persons they have the right to verify that each piece of equipment involved in the Section A of LOTO Form 47-199 has been isolated and they have the right to test the equipment or view the testing for de-energization.
  - 6.5.9.Each Authorized Person (e.g., USPL and contractor) shall confirm their understanding of Sections A, B and C (if used) of LOTO FORM 47-199 by signing and listing the date of when they applied their LOTO lock and tag in Section E of LOTO Form 47-199 prior to performing work under this LOTO Form.
  - 6.5.10. The LOTO PIC Designee shall confirm that all Authorized Persons have signed Section E of the LOTO Form 47-199.
  - 6.5.11. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title of LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes.
  - 6.5.12. As Authorized Persons permanently complete their assignment, they shall remove their LOTO lock and tag from the LOTO PIC Designee's lockbox and print the date of when they removed their LOTO lock and tag in Section E of LOTO Form 47-199.
  - 6.5.13. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title of LOTO PIC Designee Re-energization upon completion of re-energization of the equipment. Additional requirements pertaining to re-energization are listed in Section 9.
- 7. <u>Control of LOTO PIC Designee Keys for Implementation of LOTO Form 47-199 and LOTO PIC Designee</u> Form 47-199A for Offshore Platforms

- 7.1. LOTO lock keys for the isolated equipment on each platform may be maintained by the respective LOTO PIC Designee on each platform. LOTO lock keys are not required to be transported to the LOTO PIC.
- 7.2. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title LOTO PIC Designee Energy Isolation, De-energization and Verification.
- 7.3. If an Authorized Person(s) performs work at the location(s) where a LOTO PIC Designee(s) is utilized, a lockbox shall be utilized at each platform where the work is to be performed. In these instances the following requirements shall apply to preserve isolation of the equipment involved in the LOTO for all Authorized Persons:
  - 7.3.1.LOTO PIC Designee shall place their equipment LOTO lock keys in their lockbox and place a LOTO lock and tag on the lockbox.
  - 7.3.2.Authorized Person(s) at the LOTO PIC Designee's location shall place their LOTO lock and tag on the LOTO PIC Designee's lockbox.
  - 7.3.3.LOTO PIC Designee shall inform all Authorized Persons they have the right to verify that each piece of equipment on their platform and the other platforms involved in the Section A of LOTO Form 47-199 has been isolated and they have the right to test the equipment or view the testing for de-energization.
    - 7.3.3.1. If a request is made, Section A may be implemented and work may proceed with the remaining Authorized Persons under the LOTO Form 47-199.
  - 7.3.4.Each Authorized Person (e.g., USPL and contractor) shall confirm their understanding of Sections A, B and C (if used) of LOTO FORM 47-199 by signing and listing the date of when they applied their LOTO lock and tag in Section E of LOTO Form 47-199 prior to performing work under this LOTO Form 47-199.
  - 7.3.5.The LOTO PIC Designee shall confirm that all Authorized Persons have signed Section E of the LOTO Form 47-199.
  - 7.3.6. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title of LOTO PIC Designee Authorized Persons.
- 7.4. As Authorized Persons permanently complete their assignment, they shall remove their LOTO lock and tag and print the date of when they removed their LOTO lock and tag in Section E of Form 47-199.
- 7.5. The LOTO PIC Designee shall print and sign their name and date Form 47-199A under the title of LOTO PIC Designee Re-energization upon completion of re-energization of the equipment. Additional requirements pertaining to re-energization are listed in Section 9.

#### 8. Equipment Released for Work

- 8.1. After all the steps in Section A of LOTO Form 47-199 that pertain to isolation, de-energization and verification are complete and initialed, the LOTO PIC shall release the equipment for work to the Authorized Persons who have signed and dated Section E of LOTO Form 47-199.
- 8.2. If there are Authorized Persons working at the LOTO PIC Designee's site, the LOTO PIC Designee shall inform them that the LOTO PIC has released the equipment for work to the Authorized Persons who have signed and dated Section E of LOTO Form 47-199.

#### 9. <u>Re-energization</u>

- 9.1. The LOTO PIC and LOTO PIC Designee shall communicate with each other throughout the re-energization process to complete the steps listed in Section A of LOTO Form 47-199 in the proper sequence.
- 9.2. When the work is complete the LOTO PIC Designee shall remove their LOTO lock and tag from the LOTO PIC's lockbox and retrieved their equipment LOTO lock keys.
- 9.3. The LOTO PIC shall physically remove their LOTO locks and group LOTO equipment tags from the equipment's energy-isolation devices according to the steps listed on Form 47-199.
- 9.4. The LOTO PIC shall confirm that all individuals have been safely positioned or removed from the work area prior to re-energization.
- 9.5. The LOTO PIC informs all Affected Persons that the LOTO locks have been removed and re-energization of the equipment will commence.

- 9.6. If there are Authorized Persons working at the LOTO PIC Designee's work site they shall remove their LOTO lock and tag from the LOTO PIC Designee's lockbox and date Section E of LOTO Form 47-199.
- 9.7. The LOTO PIC Designee shall:
  - 9.7.1.Retrieve their key from the LOTO PIC's lockbox.
  - 9.7.2. Retrieve their equipment LOTO Lock key(s) from the LOTO PIC lockbox.
  - 9.7.3. Physically remove their LOTO locks and group LOTO equipment tags from the equipment's energyisolation devices according to the steps listed on LOTO Form 47-199.
  - 9.7.4.Inspect the work area to confirm that equipment, tools and materials have been removed and that equipment components are operationally intact.
  - 9.7.5.Confirm that all individuals have been safely positioned or removed from the work area prior to reenergization.
  - 9.7.6. Inform all Affected Persons that the LOTO locks have been removed and re-energization of the equipment will commence.
  - 9.7.7.Return their completed copy of LOTO Form 47-199 and LOTO PIC Designee Form 47-199A to the LOTO PIC.

# Appendix II LOTO PIC Designee Form 47-199A - Right of Way

Each LOTO PIC Designee shall be listed on a separate form.       Revised 6         USPL LOTO PIC Designee printed name:	Each LOTO PIC Designee shall be listed on a separate form.       Revised         USPL LOTO PIC Designee printed name:      N         Non USPL LOTO PIC Designee printed name:      N         Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?      Yes      No         Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World:       The LOTO PIC shall attach Form 47-199 to this form and list the procedure number.	6/13
USPL LOTO PIC Designee printed name:      N/         Non USPL LOTO PIC Designee printed name:      N/         Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?      YesNo         Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World:	USPL LOTO PIC Designee printed name:N Non USPL LOTO PIC Designee printed name:N Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?YesNo Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World: The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:	
Non USPL LOTO PIC Designee printed name:	Non USPL LOTO PIC Designee printed name:N Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?YesNo Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World: The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:	A/
Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?YesNo         Printed name of who verified the LOTO PIC Designee's QQ qualifications in IS Net World:         The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:         I designate the LOTO PIC Designee listed above to apply and remove LOTO locks and group LOTO equipment tags the equipment's energy isolating devices for the steps noted in Section A of Form 47-199.         TL Printed Name:       TL Signature:         Date:       Date:         on Behalf of the TL (attach e-mail):       Date:         DOM Printed Name:       DoM Signature:         LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee.         DOM Printed Name:       DoM Signature:         DOM Printed Name:       DoM Signature:         DOM Printed Name:       DoM Signature:         DOM Printed Name:       Dote:         DOM Printed Name:       DoM Signature:         DOM Printed Name:       Dote:         Dot PIC Designee Energy Isolation, Deenergization and Verification         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps 1 have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LO	Are DOT Operator Qualifications (OQ) required for the LOTO PIC Designee?YesNo Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World: The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:	A
Ale DOT Operator Qualifications (OQ) required for the LOTO PIC Designee's QQ qualifications in IS Net World:         Printed name of who verified the LOTO PIC Designee's QQ qualifications in IS Net World:         The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:         I designate the LOTO PIC Designee listed above to apply and remove LOTO locks and group LOTO equipment tags the equipment's energy isolating devices for the steps noted in Section A of Form 47-199.         TL Printed Name:       TL Signature:         LOTO PIC Physical Signature on Behalf of the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC Designee.         DOM Printed Name:       DoM Signature:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:         Dom Printed Name:       DoM Signature:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:         Dom Printed Name:       DoM Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         Dot PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         DOM Printed Name:       Dot       Dot       Date:       Date:         DOM Printed Name:       Dot       Dot Signature:       Date:       Date: <tr< td=""><td>Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World: The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:</td><td></td></tr<>	Printed name of who verified the LOTO PIC Designee's OQ qualifications in IS Net World: The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:	
Printed name of who verified the LOTO PIC Designee's OQ qualifications in Is Net World:         The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:         I designate the LOTO PIC Designee listed above to apply and remove LOTO locks and group LOTO equipment tags the equipment's energy isolating devices for the steps noted in Section A of Form 47-199.         TL Printed Name:       TL Signature:       Date:         LOTO PIC Physical Signature on Behalf of the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       Dom Signature:       Date:         DOT PIC Physical Signature       Date:       Date:         OTO PIC Physical Signature       Date:       Date:         DOT PIC Physical Signature	Printed hame of who verified the LOTO PIC Designee's OQ qualifications in IS Net World. The LOTO PIC shall attach Form 47-199 to this form and list the procedure number:	
Interpretendendendendendendendendendendendendende	LI NE LI UTU PIU SNAILATTACH FORM 47-199 TO THIS TORM AND LISETNE DROCEDURE NUMBER	
In Designation of the LOTO PIC Designee         I designate the LOTO PIC Designee listed above to apply and remove LOTO locks and group LOTO equipment tags the equipment's energy isolating devices for the steps noted in Section A of Form 47-199.         TL Printed Name:       TL Signature:       Date:         LOTO PIC Physical Signature on Behalf of the TL (attach e-mail):       District Operations Manager       Date:         I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.       Dotte:         DOM Printed Name:       Dotte:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lock box and attaches their LOTO PIC lock and tag on the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lock box and attaches their LOTO PIC		
Indesignate the LOTO FIC Designee listed above to apply and ferritive LOTO locks and group LOTO equipment tags the equipment's energy isolating devices for the steps noted in Section A of Form 47-199.         TL Printed Name:       TL Signature:       Date:         LOTO PIC Physical Signature on Behalf of the TL (attach e-mail):       Date:       Date:         District Operations Manager         I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.       Date:         DOM Printed Name:       Dom Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         DOM Signature:       Date:         DOM Signature:       Date:         Dot PIC Designee Energy Isolation, Deenergization and Verification         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lock box atter the LOTO PIC on PIC	<u>IL Designation of the LOTO Pric Designee</u>	
TL Printed Name:       TL Signature:       Date:         LOTO PIC Physical Signature on Behalf of the TL (attach e-mail):       District Operations Manager         I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       Dom Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Dot Signature:       Date:         DOM Signature:       Date:       Date:         DTD PIC Designee Energy Isolation, Deenergization and Verification       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox atter the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	T designate the LOTO PIC Designee listed above to apply and remove LOTO focks and group LOTO equipment (ag	s on
LOTO PIC Physical Signature on Behalf of the TL (attach e-mail):       Date:         District Operations Manager       I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       DOM Signature:       Date:         DOM Printed Name:       Dom Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         COTO PIC Designee Energy Isolation, Deenergization and Verification         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordancee with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox atter the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	The equipment is cherry radiating devices for the steps noted in deciding of infinite steps.	
LOTO PIC Physical Signature       Date:         on Behalf of the TL (attach e-mail):       District Operations Manager         I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec         A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       DOM Signature:         LOTO PIC Physical Signature       Date:         on Behalf of the DOM (attach e-mail):       Date:         DTO PIC Designee Energy Isolation, Deenergization and Verification       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordancee with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lock box and attaches their LOTO PIC		
District Operations Manager         I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec         A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       DOM Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         LOTO PIC Designee Energy Isolation, Deenergization and Verification         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	LOTO PIC Physical Signature Date:	
I approve the LOTO PIC Designee listed on this form to implement the identified LOTO PIC Designee steps from Sec         A of Form 47-199 which includes the communication process between the LOTO PIC and LOTO PIC Designee.         DOM Printed Name:       DOM Signature:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:         Determining the equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	on Behalf of the TL (attach e-mail):	
A of Form 47-199 which includes the communication process between the LOTO PIC Designee Steps from Sec         DOM Printed Name:       DOM Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox atter the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	District Operations Manager	
A G FORM 41-199 which includes the communication process between the LOTO FIC and LOTO FIC besignee.       Date:         DOM Printed Name:       DoM Signature:       Date:         LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox atter the LOTO PIC blaces my key(s) in their lockbox and attaches their LOTO PIC	r approve the LOTO PTC Designee instea on this form to implement the identified LOTO PTC Designee steps from se A of Form 47,100 which includes the communication process between the LOTO PTC and LOTO PIC Designee	ecuor
LOTO PIC Physical Signature on Behalf of the DOM (attach e-mail):       Date:         LOTO PIC Designee Energy Isolation, Deenergization and Verification       Date:         The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC blaces my key(s) in their lockbox and attaches their LOTO PIC	A OFFORM 41-139 WHICH INCLUDES THE COMMUNICATION PROCESS DELWEET (THE LOT OFFIC AND LOT OFFIC DESIGNED.	
LOTO PIC Physical Signature       Date:         on Behalf of the DOM (attach e-mail):       Date:            LOTO PIC Designee Energy Isolation, Deenergization and Verification        Date:            The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC's lockbox and attaches their LOTO PIC	Dom Printed Name. Dom Signature. Date.	
<u> LOTO PIC Designee Energy Isolation, Deenergization and Verification</u> The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	LOTO PIC Physical Signature Date:	
The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC baces my key(s) in their lockbox and attaches their LOTO PIC		
The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the currer job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC.	LOTO PIC Designee Energy Isolation, Deenergization and Vernication	
job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC.	The equipment, scope of the work, equipment numbers/descriptors listed on Form 47-199 are the same for the curr	ent
with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required and have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox and attaches their LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC.	job. Energy isolation, deenergization and verification have been completed for the equipment identified in accordance	ce
have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box. I shall attach my LOTO lock and tag on the LOTO PIC's lockbox and attaches their LOTO PIC.	with the applicable steps I have initialed on Form 47-199. I have placed my LOTO lock(s) and tag(s) as required an	nd
tag on the LOTO PIC's lookbox after the LOTO PIC places my key(s) in their lockbox and attaches their LOTO PIC	have returned the key(s) to the LOTO PIC for placement in the LOTO PIC's lock box L shall attach my LOTO lock a	nd
	tag on the LOTO BIC's lockbox after the LOTO BIC places my key(s) in their lockbox and attaches their LOTO BIC	
LOTO PIC Designee LOTO PIC Designee Date: Printed Name: Physical Stonature'	LOTO PIC Designee Date: Printed Name: Physical Signature:	
LOTO PIC Securing Of Isolation	LOTO PIC Securing Of Isolation	
$\frac{1}{1}$	I have received the LOTO DIC Designable LOTO lock (any(s) and have provided that in the LOTO DIC's lockbay with	hmu
Thate received the LOTO PIC besigned s LOTO Took key (s) and have secured infertin the LOTO PIC's tookbox with	That's received the LOTO PIC Designee's LOTO lock Key(s) and have secured them in the LOTO PIC's lockbox with	пшу
LOTO lock and lag. The LOTO PIC Designee has allached interin LOTO lock and lag to the LOTO PIC's locklox. The	LOTO lock and tag. The LOTPIC besigned thas all achieve their LOTO lock and tag to the LOTPIC stockbox. I	look
understand that upon completion of the work, the ECTO PIC Designee identified on this form will obtain their ECTO ic	understand that upon completion of the work, the EOTO Pict Designed definition of this form will obtain their EOTO	IOCK
levela) from my lockboy and remove their I OTO lock(a) and arey in I OTO any imment tor (a) from the any imment anorm	key(s) from my lockbox and remove their EOTO lock(s) and group EOTO equipment tag(s) from the equipment energi	gу
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energy		
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).	Printed Name: Physical Signature:	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energional isolating device(s).       Ioto Pic         LOTO Pic       LOTO Pic         Printed Name:       Physical Signature:	LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes	ΔL
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energ, isolating device(s).         LOTO PIC         Printed Name:         LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes	If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock by	shal
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).         LOTO PIC       LOTO PIC         Printed Name:       Physical Signature:         LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock hox si       NA	in hall on 200 years the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag L place	d on
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).         LOTO PIC       LOTO PIC         Printed Name:       Physical Signature:         LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box si be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed	be duringed where the work is to be performed. If have placed my Loro for key norm the Loro fock and tag i place	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).         LOTO PIC       LOTO PIC         Printed Name:       Physical Signature:         LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box si be utilized where the work is to be performed. I have placed my LOTO Plock key from the LOTO lock and tag I placed	the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on	inat
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).       LOTO PIC         LOTO PIC       LOTO PIC         Printed Name:       Physical Signature:         LOTO PIC Designee Daisy-Chaining of Multiple Lockboxes       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box si be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the location where the location is preserved.	lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authoriz	ed
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       Date:         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box si be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized	Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to	test
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       N#         Interview of the colspan="2">Interview of the colspan="2"         Interview of the colspan= table of the colspan="2"         Interview of the colspan= table of the colspan="2"         Interview of the colspan="2"         Interview of the colspan="2"         Interview of the colspan= table of the colspan="2">Interview of the colspan="2"         Interview of the colspan="2"         Interview of the colspan= table of the colspan="2"         Interview of the colspan="2"         Interview of the colspan="2"         Interview of the colspan	the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LC	DTO
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       M#         Idot PIC Designee Daisy-Chaining of Multiple Lockboxes         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box si be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT	Form 47-199.	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energi isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       M/         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box s be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox: in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT Form 47-199.	LOTO PIC Designee Date: Printer Name: Physical Signature:	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).       Date:         LOTO PIC       LOTO PIC       Date:         Printed Name:       Physical Signature:       N/         Intel Name:       Date:         Intel Name:       Date:         Intel Name:       Date:         Intel Name:         Intel Name:       Date:         Intel Name:       Date: <td< td=""><td></td><td></td></td<>		
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       N#         Isolating of Multiple Lockboxes       Date:         Intel Name:       Date:         Isolation where the LOTO PIC Designee is utilized, an additional lock box s         Isolation where the LOTO PIC Designee is utilized, an additional lock box s         be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed         the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT Form 47-199.         LOTO PIC Designee         Physical Signature:       Physical Signature:         Printed Name:       Physical Signature:		
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energion isolating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       N/         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box sis be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox: in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT PIC Designee       Date:         Form 47-199.       LOTO PIC Designee Reenergization       Date:         Printed Name:       Date:       Physical Signature:       Date:         Printed Name:       LOTO PIC Designee Physical Signature:       Date:       Date:	Thave obtained my LOTO lock keys from the LOTO PIC's lockbox, removed my LOTO lock(s) and group LOTO	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energionating device(s).       LOTO PIC         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box s be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT Form 47-199.       LOTO PIC Designee Physical Signature:       Date:         LOTO PIC Designee       LOTO PIC Designee Physical Signature:       Date:       Date:         Printed Name:       LOTO PIC Designee Reenergization.       Date:       Date:         I have obtained my LOTO lock keys from the LOTO PIC's lockbox, removed my LOTO lock(s) and group LOTO       Date:       Date:         Physical Signature:       Date:       Date:       Date:	equipment tag(s) from the energy isolation device(s) and reenergized the equipment in accordance with the application	ple
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energionating device(s).       LOTO PIC         LOTO PIC       Physical Signature:       Date:         Physical Signature:       NA         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box s be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag 1 placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT Form 47-199.         LOTO PIC Designee       LOTO PIC Designee         Physical Signature:       Date:         Printed Name:       Physical Signature:         LOTO PIC Designee       Date:         Printed Name:       Date:         Physical Signature:       Date:         Physi	steps I have initialed in Section A of LOTO Form 47-199. I shall return the completed LOTO Form 47-199 and LOTO	) PIC
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energionating device(s).       LOTO PIC         LOTO PIC       Physical Signature:       Date:         Physical Signature:       N/         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box s be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC 's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to te the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section E of LOT PIC Designee Printed Name:       Date:         LOTO PIC Designee Reenergization       LOTO PIC Designee Reenergization       Date:         Printed Name:       LOTO PIC Designee Reenergization       Date:         LOTO PIC Designee Printed Name:       Date:       Date:         Printed Name:       Date:       Date:       Date:         Printed Name:       Dator DIC's lockbox, removed my LOTO lock(s) a	Designee Form 47-199A-Right of Way to the LOTO PIC.	
key(s) from my lockbox and remove their LOTO lock(s) and group LOTO equipment tag(s) from the equipment energionating device(s).       Date:         LOTO PIC       Physical Signature:       Date:         Printed Name:       Physical Signature:       N/         If Authorized Persons perform work at the location where the LOTO PIC Designee is utilized, an additional lock box s be utilized where the work is to be performed. I have placed my LOTO lock key from the LOTO lock and tag I placed the LOTO PIC's lockbox in a lockbox at my (LOTO PIC Designee's) location. I have placed a LOTO lock and tag on the lockbox. All Authorized Persons have placed their LOTO locks and tags on my lockbox. I have informed all Authorized Persons that each piece of equipment involved in the LOTO procedure has been isolated and they have the right to the the equipment or view the testing for deenergization. All Authorized Persons have signed and dated Section of LOTO PIC Designee Printed Name:       Date:         LOTO PIC Designee       LOTO PIC Designee       Date:         Printed Name:       LOTO PIC Designee Reenergization.       Date:         LOTO PIC Designee       Date:       Date:         Printed Name:       Date:       Date:         LOTO PIC Designee       Date:       Date:         Printed Name:       Date:       Date:         LOTO PIC Designee       Date:       Date:         Printed Name:       Date:       Date:         LOTO PIC Designee       Date:       Date:	LOTO PIC Designee Date: Date:	

LOTO PIC Designee	Form 47-199A - Offshore Platforr	ns	
Each LOTO PIC Designee	e shall be listed on a separate form.	Revised 6/13	
Printed Name of TL who nominates the LOTO PIC	C Designee:		
USPL LOTO PIC Designee printed name:		NA	
Non USPL LOTO PIC Designee printed name:	Non USPL LOTO PIC Designee printed name:		
Are DOT Operator Qualifications (OQ) required fo	r the LOTO PIC Designee?YesI	No	
Individual's printed name who verified the LOTO F	PIC Designee's OQ qualifications in IS Net World:		
The LOTO PIC shall attach Form 47, 199 to this fo	rm and list the procedure number:		
I designate the LOTO PIC Designee listed above the equipment's energy isolating devices for the s	to apply and remove LOTO locks and group LOT teps noted in Section A of Form 47-199.	O equipment tags on	
TL Printed Name:	TL Signature:	Date:	
LOTO PIC Physical Signature		Date:	
on Behalf of the TL (attach e-mail):			
Dist	rict Operations Manager		
I approve the LOTO PIC Designee listed on this for A of Form 47-199 which includes the communicat	orm to implement the identified LOTO PIC Design ion process between the LOTO PIC and LOTO P	ee steps from Section IC Designee.	
DOM Printed Name:	DOM Signature:	Date:	
LOTO PIC Physical Signature		Date:	
on Behalf of the DOM (attach e-mail):			
LOTO PIC Designee Ener	rgy Isolation, Deenergization and Verification		
The equipment, scope of the work, equipment nur job. Energy isolation, deenergization and verificati with the applicable steps I have initialed on Form tag(s) on the applicable equipment's energy isolat	nbers/descriptors listed on Form 47-199 are the s ion have been completed for the equipment identi 47-199. I have placed my LOTO lock(s) and grou ion device(s) on my platform.	ame for the current fied in accordance Ip LOTO equipment	
LOTO PIC Designee Printed Name:	LOTO PIC Designee Physical Signature	e: Date:	
LOTO PIC Designed	e with Authorized Persons	NA	
If Authorized Persons perform work at the location be utilized where the work is to be performed. I he equipment tag(s) in a lockbox at my (LOTO PIC D lockbox. All Authorized Persons have placed their Persons that each piece of equipment involved in the equipment or view the testing for deenergization Form 47-199.	n where the LOTO PIC Designee is utilized, an ac ave placed my LOTO lock key(s) from the LOTO besignee's) location. I have placed a LOTO lock a COTO locks and tags on my lockbox. I have infor the LOTO procedure has been isolated and they on. All Authorized Persons have signed and dated	Iditional lock box shall lock and group LOTO nd tag on that med all Authorized have the right to test d Section E of LOTO	
LOTO PIC Designee Printed Name:	LOTO PIC Designee Physical Signature	e: Date:	
LOTO P	IC Designee Reenergization	1	
I have obtained my LOTO lock keys from the LOT LOTO equipment tag(s) from the energy isolation applicable steps I have initialed in Section A of LC LOTO PIC Designee Form 47-199A-Multiple Offsl	O PIC Designee's lockbox, removed my LOTO Ic device(s) and reenergized the equipment in acco DTO Form 47-199. I shall return the completed LC hore Platforms to the LOTO PIC.	ck(s) and group rdance with the ITO Form 47-199 and	
LOTO PIC Designee Printed Name:	LOTO PIC Designee Physical Signature	e: Date:	

# Appendix IV LOTO Lock and Tag Cutting Form

LOTO Lock and Tag Cutting and Removal Form						
This form is to be complete	d by	the	LOTO PI	с		Revised 6/13
Print the name of the LOTO PIC requesting cutting/removal:					Date	of request:
Print the name of absent lock owner:		Nam	e of lock er's compa	ny:		
LOTO Form #						
The LOTO PIC is required to attempt to contact the lock owner						
Lock owner contacted and notified If yes or no list the following: prior to cutting the LOTO lock and tag: Yes No Date: Time:						
The LOTO PIC is required to attempt to contact	The LOTO PIC is required to attempt to contact the lock owner's supervisor if unable to contact the lock owner.					
Lock owner's supervisor contacted and notified prior to cutting the LOTO lock and tag:       Yes I No I       If yes or no list the follow Date:         Print supervisor's name:       Time:			e following:			
If able or unable to contact and notify the lock owner or the lock owner's supervisor, TL/TM approval is required and then the lock can be cut and tag removed.						
Name, date and time of TL/TM granting approval fo	r cuttir	ng the	LOTO loc	k and tag:		Date:
Print name:						Time:
Sign name:						
LOTO PIC name on behalf of TL/TM for phone or e	LOTO PIC name on behalf of TL/TM for phone or email approval:					
Lock and tag cut - Date and Time:	LO	TOP	C signatur	e:		
If the lock owner is coming back to work on the syst when they were notified their lock and tag were rem	em wh noved.	here t	heir lock w N	as cut off lisi A	t	Date: Time:
LOTO PIC shall forward the completed form to the TL/TM.						

#### Lockout Policy Page 32 of 44

# Appendix V LOTO Inspection Report

Self-Verification Audit - LOTO This audit is a self-verification field inspection in support of OMS 4.5. Required 1.Select the team.

Select your answer 2.Select the auditor.

Select your answer 3.Enter the audit date (mm/dd/yy)

4.Enter the LAST name of the issuer.

5.Enter the FIRST name of the issuer.

6.Enter the LOTO number.

7.Enter the date the LOTO was issued (mm/dd/yy).

8.Were any required fields erroneously completed in any of the following sections?

(Select all that apply)

Title Page: General Information Section
 Title Page: LOTO Procedure Review and Approval Documentation
 Section A: Procedure
 Section B: P&ID or Drawings

Section C: Photographs

Section D: LOTO Person in Charge (LOTO PIC)

Section E: Authorized Persons

No Errors Found

9.Verify the following LOTO activities.

(These activities should take place for any LOTO.) ('GR' represents a Golden Rule activity.) PROVIDE DETAILS IN THE COMMENTS FIELD AT THE END OF THIS FORM FOR ANY 'NO' RESPONSES

	Yes	No
The LOTO procedure was correct for the identified scope of work.	0	0
The LOTO PIC reviewed the procedure with Authorized personnel.	0	0
LOTO locks and tags were applied to all isolation points. (GR)	0	0

#### **BP U.S. Pipelines and Logistics (USPL)** Safety Manual

	Yes	No
The LOTO was documented in the LOTO Register.	0	0
LOTO procedure addressed verification of zero energy state.	0	0
The Minimum Isolation Method for the task type was correctly applied or a deviation was approved.	0	0
A test is conducted before any related work begins to confirm the isolation is effective. (GR)	0	0

#### 10. Verify the following LOTO situational activities.

(These are situational activities that may not apply to all LOTOS.) ('GR' represents a Golden Rule activity.) PROVIDE DETAILS IN THE COMMENTS FIELD AT THE END OF THIS FORM FOR ANY 'NO' RESPONSES

		res	INU	INA
	A re-used LOTO was re-validated and signed.	0	0	0
	Each Authorized Person applied their LOTO lock(s) and tag(s) to the equipment or lock box.	0	0	0
	Group LOTO equipment tags were only applied on the energy isolating device in a group LOTO situation.	0	0	۲
	De-energized electrical equipment and adjacent energized electrical equipment were marked.	0	0	0
	A walk down of the scope of work, for the entire work crew of an electrical lockout, was conducted.	0	0	0
	Field changes to the LOTO procedure were properly documented and communicated.	0	0	0
	The LOTO procedure managed continued isolation / de-energization. (GR)	0	0	0
	The procedure is approved to isolate equipment, discharge stored energy, and reinstate equipment. (GR)	0	0	0
	There is a process to communicate the status of isolations between shifts or different workgroups. (GR)	0	0	0
11.A Prov	Any observations, details, or findings worth noting after conducting this audit? <u>vide any learnings that should be shared</u> or details pertaining to any 'No' responses from above. Enter your answer			

	€	
~		

Submit

# **Appendix VI Isolated Equipment Utilizing Blinds**

Blinds are installed to effectively isolate and secure equipment, vessels, and piping from hazardous energy so that repairs, maintenance, or servicing can be conducted without injury. Blinds take the place of LOTO locks in the implementation of LOTO Form 47-199.

#### 1. General Requirements

- 1.1. For the purpose of this LOTO Policy, a blind can be called a disc, blank, plate, slip, spectacle, skillet, swing, figure-8 or any other name, but its intended use is to stop hydraulic energy.
- 1.2. Blinding must be done if any of the following conditions exist:
  - 1.2.1.Whenever the system is open and USPL personnel are not physically on the scene and in control of the double blocks. System components might include pipelines, valves, strainers, meters, pumps, heat exchangers, air eliminators, etc.
  - 1.2.2. Work inside a storage tank where the contents of the tank are removed to achieve entry.
- 1.3. Blinding is not required for in-service tank work above a floating roof (internal or external). Utilizing block valves shall achieve isolation of product flow. For the purposes of completing the Hierarchy of Isolation Control on the Form 47-199, Task Type shall be Breaking Containment <= 145psig, Minimum Isolation Method, shall be Proven SVI and no Deviation is required.</p>

#### 2. Blind Criteria

- 2.1. In addition to any STPs and SMPs that apply to blinding, the following criteria must be met when blinds are used:
  - 2.1.1.Blinds, their bolting, and gaskets shall conform to the piping design pressure limits for the line, reference USPL-GP 42-0062, Bolting and Gaskets.
  - 2.1.2.Bolting shall be of the correct length to accommodate for any extra thickness.
  - 2.1.3.Blinds shall be purchased (not field made) and sized per the latest edition of either ASME B16.48 "Line Blanks" or B31.3 section 304.5.3 and in either case stamped with the pressure rating of the blind.
- 2.2. If you have questions please consult with the USPL Technical Authority Hydraulics and Onshore Pipeline Design.

#### 3. Opening Preparations for the Installation/Removal of a Blind

- 3.1. If the system is pressurized, Appendix X, Breaking Containment Pressure Relief shall be applied to open the flange, drain the system, and then install/remove the blind.
- 3.2. If the system is depressurized by use of vents or drains, the task of installing/removing the blind shall be assessed against the Hierarchy of Controls and the appropriate Minimum Isolation Method applied to the task.
- 3.3. Before opening any flanged joint for the installation/removal of a blind, consideration shall be given to the increased risk of the short duration job and a PTW or Level 2 HITRA shall be required along with Section A procedure steps to identify the necessary controls to assure safe isolation for blind installation/removal.
- 3.4. Some items to consider for the risk assessment are listed below but are not limited to the following:
  - 3.4.1.Confirm the exact location where the blind is necessary.
  - 3.4.2. Determine that the equipment or piping is prepared and properly released for blinding.
  - 3.4.3.Confirm that correctly sized and rated blinds are to be installed.
  - 3.4.4. Verify that lines and equipment have been depressurized and drained.
  - 3.4.5. Where a check valve is located between two isolation valves, pressure verification is required on each side of the check valve.
  - 3.4.6.Ensure that drain valves are open, where available, by using proper "rod out" equipment (i.e., a rod or other device used to ensure that the drain valve is free of debris).
  - 3.4.7. Authorized Persons used to install/remove blind shall work under the direction of the LOTO PIC.
  - 3.4.8. The LOTO PIC shall review the isolation and de-energization procedure up to the point of blind installation/removal with the Authorized Persons used to install/remove the blind.

- 3.4.9. The Authorized Persons used to install/remove the blind shall apply their locks to the LOTO PIC Lockbox or individual pieces of equipment prior to blind installation.
- 3.4.10. Determine what product or material has been contained in the equipment or piping. If this material is hazardous, obtain and wear the appropriate protective clothing and equipment per the USPL PPE Matrix (located in the safety manual).
- 3.4.11. If equipment to be blinded is above atmospheric pressure, make sure that pressure is relieved to the greatest extent possible and it is safe to install the blind.
- 3.4.12. Make provisions to capture any hydrocarbons that may drain to atmosphere from the system.
- 3.4.13. Consideration shall be made for the amount of flange spread necessary to remove and insert the blanks and the orientation of the flanges.
- 3.4.14. Consideration shall be given for the line support requirements where a removable spool or blind point is provided.

#### 4. Opening a Flanged Joint for the Installation/Removal of a Blind

- 4.1. Use the appropriate safety precautions listed in Section A of LOTO Form 47-199, PTW, the Level 2 HITRA and/or Appendix X.
- 4.2. Keep flanges open for a minimum length of time, consistent with the safe installation/removal of the blind.
- 4.3. When opening flanges suspected of containing toxic gases, perform air monitoring to determine the level of respiratory protection required for the task.

#### 5. Installation of Blinds

- 5.1. The inlet and outlet lines (except fire foam lines) shall be blinded where the contents of the tank are removed prior to entry. Subsurface fire foam/water injection lines where they are connected to a foam/water source shall be blinded.
- 5.2. Blinds should be installed at the flange as close as possible to the vessel, tank, or equipment under consideration.
- 5.3. When vessels or process equipment are interconnected in such a way that blinding of each is not possible or practical, the combination is to be considered as one vessel. The combination shall be appropriately blinded and prepared as a unit.
- 5.4. A blind shall have a gasket installed on both sides when being installed between two flanges and a gasket on one side of an end pipe blind.
- 5.5. Where there are concerns about tank roof (fixed or floating) integrity a Work at Heights Checklist, fall protection assessment, shall be conducted when it is necessary to walk on the tops of storage tanks to install blinds.
- 5.6. The location of all blinds shall be noted in Section A of LOTO Form 47-199.
- 5.7. A completed LOTO tag shall be hung as close as possible to the blind.

# Appendix VII LOTO Lock and Tag Order Form and Information

BeAed is the exclusive supplier of USPL LOTO Locks and Tags

ORDER	DATE:	Order Number:	PLBU-2006MSA0	)21
TO:	Jennifer Edwards	FROM:	US Pipelines and	Logistics
	BeAed Corporation	Location Name:		
	PO Box 1760	Contact Name:		
	Alvin, TX 77512	Shipping Address	<u>s:</u>	
	Phone: 281-331-2035	City/State/Zip:		
	Fax Orders to: 281-331-6000	Phone:		Fax:

#### SINGLE LOCKS (One key for one lock)

Lock Series Number	Shackle Length	Area 2 engraving - Yes/No	# of Locks ordered
1105	1 inch		
1106	1.5 inch		
1107	3.0 inch		

Note: Insert engraving for Area 2 here - maximum of 10 characters:

Note: Insert engraving for Area 5 here - maximum of 2 characters:

#### LOCK SETS (One key for a specified number of locks)

Lock Series Number	Shackle Length	Area 2 Engraving - Yes/No	# of Locks per Lock Set	# of Sets
1105	1 inch			
1106	1.5 inch			
1107	3.0 inch			

Note: Insert engraving for Area 2 here - maximum of 10 characters:

Note: Insert engraving for Area 5 here - maximum of 2 characters: \_\_\_\_\_

LOCKOUT TAGS			GROUP LOTO EQUIPMENT TAGS			
Part Number	Tag Color	# of Tags Ordered	Part Number	Tag Color	# of Tags Ordered	
BN# 201-0291-03	White		BN# 201-0291-08	White/Red Border		
BN# 201-0291-04	Red					
BN# 201-0291-05	Yellow					
BN# 201-0291-06	Green					
BN# 201-0291-07	Blue					

#### The following applies to all orders:

BeAed will provide only one patented key (i.e., not reproducible) per lock or per lock set.

The locks will be orange in color and engraved as follows:

- AREA 1 (lock front top) engraved with USPL
- AREA 2 (lock front bottom) optional field for engraving (maximum of 10 characters)
- AREAS 3 and 4 will not be used for engraving
- <u>AREA 5</u> (lock back bottom) engraved with location's first two letters of the location name (e.g., O'Hare = OH, Freeman = FR, Manhattan Station = MA, Brooklyn = BR).

Sequence number shall be issued and tracked by BeAed.

LOTO lock keys will be engraved with the same location initials and sequence number from Area 5 of the lock.

Lock shackles will fit through the LOTO tag eyelets; however nylon ties may be used to secure the tags if needed.



#### LOCK SERIES NUMBERS AND SPECIFICATIONS

American Lock Series	Shackle Length	Shackle Diameter	Body Width	Body Thickness
1105	1"	<sup>3</sup> /4"	1.5"	3/4"
1106	1.5"	3/4"	1.5"	3/4"
1107	3"	3/4"	1.5"	3/4"

The tag below is used on equipment for Individual LOTO and on the lockbox for Group LOTO. Tag Back Tag

Front
-------

DANGER	DANGER
LOCKED OUT The person listed below applied this LOTO lock and tag. This LOTO lock and tag shall only be removed by the person listed below:	This energy source has been LOCKED OUT! DO NOT OPERATE Remarks:
Print Name:	
Date Applied:	
Phone No:	
Procedure No:	BN# 201-0291-03 beAed

The tag below is used only on the equipment's energy isolation device for Group LOTO. Tag Front Tag Back



# Appendix VIII Simple LOTO Form

SIMPLE LOT		
	O Form 47-199B	Revised 12/2019
number or descriptor is correct and that the number	re equipment by confirming the following: the equipment.	ulpment is correct, the
List the equipment, its location and equipment nun	mber or equipment descriptor covered by this Sin	nple LOTO.
1.		
2.		
Heirarchy of Isolation Control: (select Simple I OTO	) Task Type - only those listed are allowed for Si	imple LOTO)
>145 psig - Proven DBB using One value	<145 psig - Proven SVI Disconnect/Breat	ker/Fuse/Isolation Device
The Authorized Person shall determine that the ag	upment and work in this Simple LOTO meets al	L of the requirements listed
below and forwards the form to the Operations $TL/7$	TM for approval.	i of the requirements listed
<ol> <li>Equipment shall have only a single type of energy energy for a rectifier, or only hydraulic energy for a</li> </ol>	gy source which can be readily identified and iso pressure gauge, or only hydraulic energy for loa	lated (e.g. only electrical d head coupler).
a. Electrical energy shall be less than or equal to	o 600 volts.	
<ul> <li>b. There shall be no collateral sources of energy</li> <li>2. A single energy isolation device shall achieve de applied. (Tag Out Only allowed for AC 0-50V / DC</li> </ul>	in or connected to the equipment. eenergization and isolation to which a single LOT 0-120V) Examples of single energy isolation devi	O lock and tag shall be ices are:
a. One circuit breaker isolates a rectifier		
<ul> <li>b. One valve isolates a pressure gauge</li> <li>Note: A tank's inlet or outlet valve's pressure/tl isolation points, upstream and downstream, of</li> </ul>	hermal relief valve does not meet this condition b f the pressure/thermal relief valve.	ecause there are two
3. Equipment has no potential for stored or residua could endanger employees.	al energy, or the reaccumulation of stored energy	after it is shut down which
4. The same Authorized Person shall perform the e deenergization, affixing the USPL LOTO lock and t maintenance, removing their LOTO lock and tag a	entire Simple LOTO and the associated work whi tag, verification of isolation and deenergization, p and regneratizing the equipment	ich includes: isolation, erforming the servicing or
5. The servicing or maintenance on the isolated eq	uipment does not create hazards for other emplo	oyees.
<ol><li>Incidents involving the unexpected activation or r occurred in the past.</li></ol>	reenergization of the equipment during servicing	and maintenance have not
I confirm the unlidetion of the equipment listed and	<u>Authorized Person</u>	nto listed share
Authorized Person	Authorized Person	Date:
Printed Name:	Signature:	Dato.
<b>Operations TL</b> I approve this Simple LOTO and the Authorized Pe	/TM Authorization of the Simple LOTO erson to perform the Simple LOTO. I have inform	ned the Asset Operator to
update the SIMOPS board, LOTO Register and AT	TW Form.	
update the SIMOPS board, LOTO Register and A TL/TM Printed	TW Form.	Date:
update the SIMOPS board, LOTO Register and A TL/TM Printed Name:	TW Form. TL/TM Signature:	Date:
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email:	TW Form. TL/TM Signature:	Date:
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email:	TW Form. TL/TM Signature: Authorized Person	Date:
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space i isolated and deenergized the equipment that has	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source.	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space isolated and deenergized the equipment that has affixed my one LOTO lock and USPL tag to the e	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device.	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space isolated and deenergized the equipment that has affixed my one LOTO lock and USPL tag to the e verified isolation and deenergization (Electrical Isola	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. tions shall complete degenergization verification steps o	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space isolated and deenergized the equipment that has affixed my one LOTO lock and USPL tag to the e verified isolation and deenergization( <i>Electrical Isola</i> performed the work i.e., maintenance, installing, r assistance from any other individual.	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. titions shall complete degenergization verification steps o modifying or servicing on the equipment with no	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space I isolated and deenergized the equipment that has I affixed my one LOTO lock and USPL tag to the e I verified isolation and deenergization( <i>Electrical Isola</i> I performed the work i.e., maintenance, installing, r assistance from any other individual.	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. etiions shall complete degenergization verification steps o modifying or servicing on the equipment with no ized the equipment identified above.	Date: Date: is completed.
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space I isolated and deenergized the equipment that has I affixed my one LOTO lock and USPL tag to the e I verified isolation and deenergization( <i>Electrical Isola</i> I performed the work i.e., maintenance, installing, r assistance from any other individual. I removed my one LOTO lock and tag and reenergi After the equipment is reenergized the Authorized TL/TM.	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. trions shall complete degenergization verification steps o modifying or servicing on the equipment with no ized the equipment identified above. Person shall forward this completed Simple LOT	Date: Date: is completed. n page 2) TO Form 47-199B to the
update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space l isolated and deenergized the equipment that has a flixed my one LOTO lock and USPL tag to the e I verified isolation and deenergization ( <i>Electrical Isola</i> l performed the work i.e., maintenance, installing, r assistance from any other individual. I removed my one LOTO lock and tag and reenergi After the equipment is reenergized the Authorized TL/TM.	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. titions shall complete degenergization verification steps o modifying or servicing on the equipment with no ized the equipment identified above. Person shall forward this completed Simple LOT	Date: Date: is completed. n page 2) FO Form 47-199B to the
Update the SIMOPS board, LOTO Register and A TL/TM Printed Name: Authorized Person Printed Name on behalf of the TL/TM after receiving their email: Authorized Person prints their initials in the space isolated and deenergized the equipment that has affixed my one LOTO lock and USPL tag to the e verified isolation and deenergization (Electrical Isola performed the work i.e., maintenance, installing, r assistance from any other individual. removed my one LOTO lock and tag and reenergi After the equipment is reenergized the Authorized TL/TM. Electrical Isolation Verification Steps: Verify Authorized Person is an Electrical Verification	TW Form.  TL/TM Signature:  Authorized Person on the right to verify that each step listed below a single energy source.  quipment's single energy isolation device.  tions shall complete degenergization verification steps o modifying or servicing on the equipment with no ized the equipment identified above. Person shall forward this completed Simple LO1	Date: Date: is completed. n page 2) FO Form 47-199B to the
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         fb the TL/TM after receiving their email:         Authorized Person prints their initials in the space         isolated and deenergized the equipment that has         affixed my one LOTO lock and USPL tag to the e         verified isolation and deenergization( <i>Electrical Isola</i> )         performed the work i.e., maintenance, installing, rassistance from any other individual.         removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         TL/TM.         Electrical Isolation Verification Steps:         Verify Authorized Person is an Electrically Qualified	TW Form.         TL/TM         Signature:         Authorized Person         on the right to verify that each step listed below         a single energy source.         equipment's single energy isolation device.         trions shall complete degenergization verification steps of         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LOT         d Person         using inspection windows. status flags. Open/Close	Date: Date: is completed. n page 2) TO Form 47-199B to the
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         fb the TL/TM after receiving their email:         Authorized Person prints their initials in the space         isolated and deenergized the equipment that has         affixed my one LOTO lock and USPL tag to the e         verified isolation and deenergization( <i>Electrical Isola</i> )         performed the work i.e., maintenance, installing, r         assistance from any other individual.         removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         TL/TM.         Verify Authorized Person is an Electrically Qualified         Verify Authorized Person is an Electrical solation properly upanel	TW Form.         TL/TM         Signature:         Authorized Person         on the right to verify that each step listed below         a single energy source.         equipment's single energy isolation device.         trions shall complete degenergization verification steps o         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LO1         d Person         using inspection windows, status flags, Open/Close         tible.	Date: Date: is completed. in page 2) TO Form 47-199B to the
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         fb f	TW Form.         TL/TM         Signature:         Authorized Person         on the right to verify that each step listed below         a single energy source.         quipment's single energy isolation device.         trions shall complete degenergization verification steps o         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LO1         d Person         using inspection windows, status flags, Open/Close         sible.         eaker/disconnect has been de-energized using par	Date: Date: Date: is completed. is completed
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         fb f	TW Form.         TL/TM         Signature:         Authorized Person         on the right to verify that each step listed below         a single energy source.         quipment's single energy isolation device.         trions shall complete degenergization verification steps or         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LO1         d Person         using inspection windows, status flags, Open/Close         sible.         eaker/disconnect has been de-energized using part         voltage tester on known source.	Date: Date: Date: is completed. is completed
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         of the TL/TM after receiving their email:         Authorized Person prints their initials in the space         I isolated and deenergized the equipment that has         I affixed my one LOTO lock and USPL tag to the e         I verified isolation and deenergization( <i>Electrical Isola</i> )         I performed the work i.e., maintenance, installing, r         assistance from any other individual.         I removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         TL/TM.         Electrical Isolation Verification Steps:         Verify Authorized Person is an Electrically Qualified         Verify encult breaker/disconnect opened properly up         panel       meter or protective relay for all phases if poss         Verify the operation of a properly rated non-contact	TW Form. TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. quipment's single energy isolation device. trions shall complete degenergization verification steps o modifying or servicing on the equipment with no ized the equipment identified above. Person shall forward this completed Simple LO1 d Person using inspection windows, status flags, Open/Close sible. eaker/disconnect has been de-energized using par tvoltage tester on known source. d non-contact voltage tester on source.	Date: Date: Date: is completed. is completed. in page 2) FO Form 47-199B to the completed. FO Form 47-199B to the completed. CO Form 47-199B to the completed. comple
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         of the TL/TM after receiving their email:         Authorized Person prints their initials in the space         I isolated and deenergized the equipment that has         I affixed my one LOTO lock and USPL tag to the e         I verified isolation and deenergization( <i>Electrical Isola</i> )         performed the work i.e., maintenance, installing, rassistance from any other individual.         Iremoved my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         TL/TM.         Electrical Isolation Verification Steps:         Verify Authorized Person is an Electrically Qualified         Verify encuit breaker/disconnect opened properly up         panel       meter or protective relay for all phases if poss         Verify the operation of a properly rated non-contact	TL/TM Signature: Authorized Person on the right to verify that each step listed below a single energy source. equipment's single energy isolation device. trions shall complete degenergization verification steps of modifying or servicing on the equipment with no ized the equipment identified above. Person shall forward this completed Simple LO1 d Person using inspection windows, status flags, Open/Close sible. eaker/disconnect has been de-energized using part voltage tester on known source. d non-contact voltage tester on all phase conductor ontact voltage tester on known source. eter on known source.	Date: Date: Date: is completed. is completed
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         fof the TL/TM after receiving their email:         Authorized Person prints their initials in the space         isolated and deenergized the equipment that has         affixed my one LOTO lock and USPL tag to the e         verified isolation and deenergization( <i>Electrical Isola</i> performed the work i.e., maintenance, installing, rassistance from any other individual.         removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         Verify Authorized Person is an Electrically Qualified         Verify verify authorized Person is an Electrically Qualified         Verify equipment downstream of opened circuit bre         Verify equipment downstream of opened circuit bre         Verify the operation of a properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the operation of a properly rated non-contact	TW Form.         TL/TM         Signature:         On the right to verify that each step listed below         a single energy source.         equipment's single energy isolation device.         trions shall complete degenergization verification steps o         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LOT         d Person         using inspection windows, status flags, Open/Close         ible.         eaker/disconnect has been de-energized using part         t voltage tester on known source.         d non-contact voltage tester on all phase conductor         ontact voltage tester on all phase conductors. Test phane	Date: Date: Date: is completed. is completed. n page 2) CO Form 47-199B to the completed. CO Form 47-199B to
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         of the TL/TM after receiving their email:         Authorized Person prints their initials in the space         I isolated and deenergized the equipment that has         affixed my one LOTO lock and USPL tag to the electrical isolation and deenergization( <i>Electrical Isola</i> I performed the work i.e., maintenance, installing, rassistance from any other individual.         I removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized TL/TM.         Electrical Isolation Verification Steps:         Verify equipment downstream of opened circuit bre asset of voltage with the properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the operation of a properly rated non-contact         Verify the operation of the properly rated non-contact         Re-verify the operation of the properly rated non-contact	TW Form.         TL/TM         Signature:         On the right to verify that each step listed below         a single energy source.         equipment's single energy isolation device.         trions shall complete degenergization verification steps o         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LOT         d Person         using inspection windows, status flags, Open/Close         ible.         eaker/disconnect has been de-energized using part         t voltage tester on known source.         d non-contact voltage tester on all phase conductors         neter on known source.         d handheld meter on all phase conductors. Test ph         eld meter on known source.	Date: Date: Date: is completed. is completed. n page 2) CO Form 47-199B to the lights, confirm 0 volts on the I meters, relays, lights, etc. s. ase to phase and phase to
update the SIMOPS board, LOTO Register and A         TL/TM Printed         Name:         Authorized Person Printed Name on behalf         of the TL/TM after receiving their email:         Authorized Person prints their initials in the space         I isolated and deenergized the equipment that has         I affixed my one LOTO lock and USPL tag to the e         Verified isolation and deenergization( <i>Electrical Isola</i> I performed the work i.e., maintenance, installing, r         assistance from any other individual.         I removed my one LOTO lock and tag and reenergi         After the equipment is reenergized the Authorized         TL/TM.         Electrical Isolation Verification Steps:         Verify valutorized Person is an Electrically Qualified         Verify equipment downstream of opened circuit breaker/disconnect opened properly rupanel         werify equipment downstream of opened circuit breaker/disconnect openel yout breaker on or coord verify the operation of a properly rated non-contact         Verify the absence of voltage with the properly rated non-contact         Verify the absence of voltage with the properly rated mon-contact         Verify the operation of a properly rated handheld m         Verify the operation of the properly rated handheld m         Verify the operation of the properly rated handheld m         Verify use of shorting sticks and grounding cluster<	TW Form.         TL/TM         Signature:         On the right to verify that each step listed below         a single energy source.         equipment's single energy isolation device.         trions shall complete degenergization verification steps o         modifying or servicing on the equipment with no         ized the equipment identified above.         Person shall forward this completed Simple LOT         d Person         using inspection windows, status flags, Open/Close         ible.         eaker/disconnect has been de-energized using part         totlage tester on known source.         eter on known source.         eter on known source.         eter on known source.         eter on known source.         eld meter on known source.         swhenever possible.         isone toergized using the source.	Date: Date: Date: is completed. is completed. in page 2) CO Form 47-199B to the completed. CO Form 47-199B t

# Appendix IX Hierarchy of Isolation Control

The highest quality and security of isolation that is reasonably practicable in the prevailing circumstances shall always be used. Deviation from a selected Minimum Isolation Method shall follow the requirements indicated in the Deviation and Deviation Approval columns below. The following list describes various possible isolation methods in decreasing order of security and effectiveness:

Task Type	Minimum Isolation Method	Deviation	<b>Deviation Approval</b>
Vessel entry, Tank Entry below Floating Roof	Positive Isolation at the closest	Positive Isolation at next available point	Level 2 HITRA reviewed & LOTO Procedure approved by DOM
		Any other isolation method	Safety Policy Deviation
PSI Hot Work		Proven DBB	Level 2 HITRA reviewed & LOTO Procedure approved by TM/TL
		Unproven DBB or Proven SVI	Level 2 HITRA reviewed & LOTO Procedure approved by DOM
	Positive Isolation	Other Isolation Device(OID) with written procedure or Unproven SVI on shut down systems	Level 2 HITRA reviewed & LOTO Procedure approved by DOM
		Other Isolation Device(OID) with written procedure or Unproven SVI on live systems	Safety Policy Deviation
Breaking Containment operating pressure >145 psig,	Proven DBB	Unproven DBB, Proven SVI, or Unproven SVI	Level 2 HITRA reviewed & LOTO Procedure approved by TM/TL
Breaking Containment operating pressure <= 145 psig	Proven SVI	Unproven SVI	Level 2 HITRA reviewed & LOTO Procedure approved by TM/TL
Electrical / Instrumentation	Disconnect/Breaker/Fuses/Energy Isolation Device opened or applied and locked plus test confirmation de-energized	Lock not applied	Level 2 HITRA reviewed & LOTO Procedure approved by TM/TL
Electrical / Instrumentation AC 0-50V / DC 0-120V	Disconnect/Breaker/Fuses/Energy Isolation Device opened or applied and tagged plus test confirmation de-energized	Tag not applied	Level 2 HITRA reviewed & LOTO Procedure approved by TM/TL

Review Date: 05/01/2020 Next Review Date: 05/01/2025 The controlled version of this document can be found in DRM in the HSSE Policies folder. Effective Date: 06/30/2020

# Appendix X Breaking Containment Pressure Relief

## Safety Considerations:

- Identify the contents of the piping system.
- Review Safety Data Sheet for hazards and safe handling procedures for any substances that may be encountered.
- Locate a safety shower/eyewash or other facility for quick drenching of the eyes and body.
- Locate clear pathways for evacuation of area
- Observe piping and review maintenance history for indications of pipe strain or mis-alignment

## Controls to consider:

- 1. Inform personnel in the area of the pipe that will be opened.
- 2. Clear the affected area of unauthorized personnel and remove or cover materials and equipment that could be impacted by the possible release of piping system contents.
- 3. Station an attendant at a safe distance to observe the pipe opening and assist in getting any splashed individual to a safety shower/eyewash.
- 4. Protect nearby drains, catch basins, and soil by covering with plastic sheeting resistant to the chemicals in the pipe or equipment. The use of a dike or dam can be utilized.
- 5. Place a bonded and grounded container under the flange or equipment to catch any released liquid.
- 6. Use absorbent pads and plastic sheeting under container
- 7. Don appropriate PPE per the PPE Matrix for liquid splashes.
- 8. Confirm the completion of draining or venting if possible by checking available pressure or level gauges.
- 9. Use shielding i.e. plastic tarps, rubber matting, and cloth barriers to provide a barrier between the individual and the pipe or equipment to divert splashes. Wrapping a rag around smaller fittings like unions and tube fittings can provide protection from spray or splash.
- 10. Whenever possible, remove flange bolts on the side away from yourself and other workers, leaving a minimum of two, then loosen these bolts and, without completely removing the nuts, spread the flange.
- 11. Always spread the flange on the side away from workers first so any sudden release will be directed away from personnel.
- 12. For flanges that are not in the vertical position, open the side of the pipe or equipment away from the individual first so that any unexpected splash or release flows away from him or her (do not stand in the line of fire). Slowly loosen bolts on fittings or flanges, and be alert for escaping pressure or materials.
- 13. Separate flanges or fittings carefully after bonding/grounding cables are installed across the equipment.
- 14. When removing pipes or equipment, tilt if necessary to completely drain. Use care to ensure that residual contents are not accidentally released from openings.
- 15. Use sufficient pipe supports and restraints to keep pipe flanges in alignment when separated
- 16. Stop SIMOPS within a 100 ft radius while opening joint to relieve pressure: stop Hot Work to eliminate an ignition source, stop all other work and move all unnecessary personnel out of the area to minimize the number of people affected by a release or fire/explosion

### **Breaking Containment for Pressure Relief**

Energy Activity Source		Hazard	Consequences	Controls
Chemical	While opening fitting hydrocarbon liquid or vapour spills or splashes onto people	<ul> <li>Inhalation of vapors</li> <li>Inhalation of liquid</li> <li>Ingestion of liquid</li> <li>Contact of vapour or liquid with skin</li> <li>Contact of vapour or liquid with soft tissue</li> </ul>	<ul> <li>Life threatening injuries</li> </ul>	2, 3, 7, 9, 10, 11, 12
Chemical	While opening fitting hydrocarbon liquid or vapour spills or escapes into environment	<ul> <li>Contact with ground, vegetation or wildlife</li> </ul>	<ul> <li>Damaged or dead vegetation Contaminated soil</li> <li>Injured or dead wildlife</li> </ul>	4, 5, 6, 14
Chemical & Pressure	While opening fitting hydrocarbon sprays onto people	<ul> <li>Impingement and penetration of skin or soft tissue</li> </ul>	<ul> <li>Life threatening injuries</li> </ul>	2, 3, 7, 9, 10, 11, 12
Chemical & Electrical or Thermal, SIMOPS	While opening fitting hydrocarbon liquid/vapour is released and contacts an ignition source resulting in fire or explosion impacting people	<ul> <li>Burns to skin</li> <li>Smoke inhalation</li> <li>Flying debris striking people</li> <li>Blast wave striking people</li> </ul>	<ul> <li>Multiple life threatening injuries or death</li> </ul>	2, 3, 7, 9, 10, 11, 13, 16
Chemical & Electrical or Thermal, SIMOPS	While opening fitting hydrocarbon liquid/vapour is released and contacts an ignition source resulting in fire or explosion impacting environment	<ul> <li>Burned or destroyed vegetation,</li> <li>wildlife smoke inhalation or burned during blast, fire or evacuation</li> </ul>	<ul> <li>Scorched earth unable to sustain growth</li> <li>Injured or deceased wildlife</li> </ul>	4, 5, 6, 13, 16
Chemical, Pressure, & Mechanical	While opening fitting pipe springs out or alignment allowing uncontrolled spray/spill of product onto people product	<ul> <li>People struck by pipe movement</li> <li>Inhalation of vapors</li> <li>Inhalation of liquid</li> <li>Ingestion of liquid</li> <li>Contact of vapour or liquid with skin</li> <li>Contact of vapour or liquid with soft tissue</li> </ul>	Life threatening injury	2, 3, 7, 9, 10, 11, 12, 15
Chemical, Pressure, & Mechanical	While opening fitting pipe springs out or alignment allowing uncontrolled spray/spill of product into environment	<ul> <li>Contact with ground, vegetation or wildlife</li> </ul>	<ul> <li>Damaged or dead vegetation Contaminated soil</li> <li>Injured or dead wildlife</li> </ul>	4, 5, 6, 14, 15

# Appendix XI Demolition / Decommission Plan

Scope of Work - Project Description:						
List Specific Equi	List Specific Equipment to be Demolished / Decommissioned:					
Identify/List Spec	ific Location Point	s where Equipment	t will be disconnec	ted /removed:		
Drawings			Drawings			
Marked:			Reviewed:			
Field Locations of	Demolition / Deco	mmission Points p	hysically marked:			
Drawing and Field	Locations of Dem	olition / Decommiss	sion Points Verified	by AO:		
Drawing and Field	Locations of Demo	Unition / Decommiss	sion Foints Vermeu	by AO.		
Drawing and Field	Locations of Demo	olition / Decommiss	sion Points Verified	by PA:		
Asbestos Abatem	ent Required:					
Lead Abatement	Required:					
Contaminated Eq	uipment identified	:				
LOTO Required:	Domolished / Dee		lated / Do onersize	d / Dusined of Llar		
Equipment to be	Demolished / Deco	ommissioned is iso	lated / De-energize	ed / Drained of Haz	ardous Energy:	
Floctrical:						
Other:						
other.						
Verification of De	-energization at All	Demolition / Deco	mmission Points Ve	erified by AO:		
Verification of De	-energization at All	Demolition / Deco	mmission Points Ve	erified by PA:		
		,		, ,		
Other Checklists	Required:					
Hot Work						
Lifting						
Work at Heights						
Excavation						
Confined Space						
	1	1	l .	•		
Facility Issues:						
Power/data						
Lighting						
Ventilation						
Alarms						
Fire Systems						
Utilities						
Structural						
i rattic						
Access/Egress						
Notifications						
Process / Live side	es of Equipment re-	L -connected / blinde	l d / capned / nluggi	ed / secured:	·	
			- / competent hinger			
	1		1			

Effective Date: 06/30/2020