

Cold Work

1. Purpose

The purpose of this policy is to establish the US Pipelines and Logistics (USPL) requirements for controlling and managing a wide range of risks associated with the performance of “cold work” as defined herein.

2. Scope

This policy applies to all employees and contractors while performing cold work on behalf of USPL.

The following policies and procedures are either referenced or are applicable to this policy and should be consulted for specific related requirements and guidance:

- Authorization to Work
- Diving Procedures
- Electrical Safety
- Lessons Learned Procedure
- Level 2 Hazards Identification and Task Risk Assessments (HITRA) Procedure
- Lockout Program
- Radiation Safety
- Respiratory Protection Policy
- Shift Handover Procedure
- Stop Work Procedure
- Working at Heights

3. Minimum Requirements

	Minimum Requirements	Supporting Documentation
1.	A Cold Work Permit shall be completed and issued prior to conducting any permitted cold work as defined in this policy.	Section 6 & Appendix II
2.	All Cold Work Permits shall be issued by an Asset Operator (or Asset Operator Designee) and shall be received by a Performing Authority. <i>Self-permitting is prohibited.</i>	Section 5 & 6
3.	A Level 2 HITRA shall be conducted prior to issuance of Cold Work Permits specified in Section 6.	Section 6
4.	Individuals performing cold work roles shall be trained and competent to execute their responsibilities as defined in this policy.	Section 7
5.	All personnel performing work on behalf of USPL have the responsibility and authority to stop any work they consider to be unsafe.	Section 5

4. Definitions

Asset Operator (AO)—A BP employee who is responsible for the operation of the asset where work is being performed. The Asset Operator shall be accountable for the asset equipment being in a safe condition for the scope of work to be performed. **The Asset Operator or an Asset Operator Designee (if used) is responsible for the completion of the ATW form.**

Asset Operator Designee (AOD)—A BP employee or contractor individual who is authorized to issue **ATWs and / or** permits on behalf of the Asset Operator.

Note: Reference the Authorization to Work policy for additional information

Authorization to Work (ATW)—An approved management system that controls work in a safe manner through the use of the ATW form.

Boundary—For the purposes of this policy, an approach limit as applied to electrical safety:

- **Arc flash boundary**—When an arc flash hazard exists, an approach limit at a distance from a prospective arc source within which a person could receive a second degree burn if an electrical arc flash were to occur.
- **Limited approach boundary**—An approach limit at a distance from an exposed energized electrical conductor or circuit part within which a shock hazard exists.
- **Prohibited approach boundary**—An approach limit at a distance from an exposed energized electrical conductor or circuit part within which there is an increased risk of shock, due to electrical arc-over combined with inadvertent movement, for personnel working in close proximity to the energized electrical conductor or circuit part.
- **Restricted approach boundary**—An approach limit at a distances from an exposed energized electrical conductor or circuit part within which a shock hazard exists.

Cold Work—Cold work is a work classification that includes construction, maintenance, demolition, remediation, operation or other work that **does not** fall into one of the following categories.

- Confined Space Entry
- Excavation
- Hot Work
- Lifting and Rigging

Exposed (as applied to electrical live parts)—Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts that are not suitably guarded, isolated or insulated.

Isolations—Blocking in, blinding or lockout of equipment or systems

Job Site—Within visual proximity of the work being performed

Level 2 Hazard Identification Task Risk Assessment (HITRA)—Is a structured process to identify the hazards and specify actions to mitigate these hazards for a work activity or task.

On-site—Physically being on the property or within the property fence line where work is being performed

Overrides—Controls or interlocks that have been bypassed or disabled

Performing Authority—A BP employee or individual contractor who receives a permit once it has been issued by the Asset Operator or Asset Operator Designee. The Performing Authority is responsible for ensuring that everyone working under a specific permit adheres to the permit's documented conditions.

Note: Reference the Authorization to Work policy for additional information

Permit Issuance—The act of the Asset Operator or Asset Operator Designee issuing a permit to a Performing Authority. Permit Issuance is documented in Section C of the ATW form.

Note: Reference the Authorization to Work policy for additional information

Permit Issuance Delegation—The act of the Asset Operator delegating the responsibility of issuing permits to an Asset Operator Designee on behalf of the Asset Operator. Permit Issuance Delegation is documented in section D of the ATW form.

Permit Register— A log for recording the status of permits and Lock Outs Tag Outs (LOTOs).

Permitted Cold Work is work that requires a Cold Work Permit and may require a Level 2 Hazard Identification and Task Risk Assessment (HITRA). The types of Permitted Cold Work include the following which are defined in Section 6.1:

- Breaking Containment Pressure Relief
- Diving
- Energized Electrical Work
- Movement of Heavy Equipment inside a Facility
- Radiation Source
- Toxic Substance Exposure
- Work at Heights

Qualified person—One who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the hazards involved.

Shall—is used where a provision is mandatory.

Should—is used where a provision is preferred.

Simultaneous Operations (SIMOPS)—Separate activities including product movement or work tasks that have the potential to impact each other.

Workforce—Any BP employee or contractor who is engaged in performing work on behalf of USPL

5. Roles and Responsibilities

5.1. Asset Operator (or designee)

- A. Shall issue permits to the Performing Authority or can delegate permit issuance to the AOD.
 1. Shall review and verify that permit conditions are deemed acceptable for the defined scope of work and affected equipment.
- B. Shall determine if changes can be made to a permit if permit conditions are exceeded or if the permit should be cancelled and a new permit issued.
 1. If the Asset Operator determines that changes to the permit can be made, he / she shall document their approval of the changes by initialing the changes where they are documented on the permit.

Note: Refer to the Authorization to Work policy for additional requirements.

5.2. Performing Authority

- A. Shall receive permits from the Asset Operator or Asset Operator Designee.
- B. Shall monitor the permitted cold work and verify that the work is performed within the conditions documented on the Cold Work Permit
- C. Shall reassess the job site and revalidate the permit before work can resume if permitted work is interrupted or if the job site is left unattended, or if necessary, cancels the permit and returns it to the AO / AOD.
- D. Shall stop work, suspend the permit, and notify the AO / AOD if permit conditions are exceeded.
- E. Shall verify that changes to permits issued by phone-validation are verbally approved by the Asset Operator or Asset Operator Designee if utilized, and shall initial approved changes on the permit and communicate them to the workforce before allowing work to recommence (see Section 6.3.H).

Note: Refer to the Authorization to Work policy for additional requirements.

5.3. Workforce

- A. Shall participate in the development and / or review of Level 2 HITRAs.
- B. Shall verify that equipment used in performing work is fit for purpose through visual inspection and / or review of any certification.
- C. Shall stop work per Stop Work Procedure if conditions change in such a way that permit conditions or controls listed in the permit are not in compliance.
- D. Shall report any lessons identified per Lessons Learned Procedure.

Note: Refer to the Authorization to Work policy for additional requirements.

6. Cold Work Permit

A Cold Work Permit (Appendix III) is a formal documented agreement between the Asset Operator and the Performing Authority that along with a completed ATW and a Level 2 HITRA (if applicable), authorizes the performance of the tasks specifically identified in the permit.

6.1. Types of Permitted Cold Work

Note: A Level 2 HITRA is required for the following Cold Work Permits: Breaking Containment Pressure Relief, Diving, Energized Electrical Work, Toxic Substance Exposure, and Work at Heights.

A. Breaking Containment Pressure Relief

- 1. A Cold Work – Breaking Containment Pressure Relief Permit shall be required when relieving pressure through any fitting other than using a valve (e.g. breaking a flange).

B. Diving

Working underwater with supplied air shall require a Cold Work Permit. SCUBA diving is not allowed per the Diving Policy. The requirements for diving are specified in USPL STP 78-215 Diving Specifications. The requirements for safe operations, including associated above water activities, are identified through the use of the Level 2 HITRA, Cold Work - Diving Permit, and ATW.

C. Energized Electrical Work

- 1. USPL requires that energized electrical conductors and circuit parts shall be put into an electrically safe work condition before commencing work. A Cold Work - Energized Electrical Work Permit as outlined below and in the USPL Electrical Safety Policy shall be required if either of the following conditions exist:

- a) Crossing the limited approach boundary or
- b) interacting with electrical equipment where conductors or circuit parts are not exposed, but an increased risk of injury from an exposure to an arc flash hazard exists.

- 2. Work performed within the limited approach boundary or the arc flash boundary of exposed energized electrical conductors or circuit parts that operate at more than 50 volts requires a Cold Work - Energized Electrical Work permit. A Cold Work - Energized Electrical Work permit shall only be allowed where it can be demonstrated that de-energizing is a:

- a) **Greater Hazard:** de-energizing introduces additional hazards or increased risk (e.g. deactivation of emergency alarm systems, or shutdown of hazardous location ventilation equipment), or
- b) **Infeasible:** the task to be performed is infeasible in a de-energized state due to equipment design or operational limits.

3. Energized electrical conductors and circuits parts that operate at less than 50 volts shall not be required to be de-energized and does not require a Cold Work - Energized Electrical Work Permit. Based on generally accepted industry standards and recommended practices, the risk of electrocution or significant shock injury is reduced to acceptable levels.

4. Work performed within the limited approach boundary of energized electrical conductors or circuit parts by qualified persons related to tasks such as testing, troubleshooting, and voltage measuring shall be permitted to be performed without a Cold Work - Energized Electrical Work permit, with appropriate safe work practices and personal protective equipment in accordance with USPL Electrical Safety Policy. If the purpose of crossing the limited approach boundary is only for visual inspection and the restricted approach boundary will not be crossed, then a Cold Work - Energized Electrical Work permit is not required.

5. Only Qualified persons meeting the requirements outlined in NFPA 70E, 2012 edition, Section 110.2 and 29 CFR 1910.332 may perform the work covered by the Cold Work - Energized Electrical Work Permit.

6. Qualified persons who are permitted to work on exposed energized conductors or circuit parts shall select and use work practices that provide protection from shock, arc flash and other electrical hazards. Both a shock analysis and an arc flash analysis shall be performed before any person is permitted to approach the exposed energized electrical conductors or circuits.

7. The shock hazard analysis shall be conducted for each facility prior to issuing a Cold Work - Energized Electrical Work permit. This activity shall include electrically qualified personnel and the Site Electrical Engineer to properly identify the voltage rating of the conductors or circuits to be worked on. The shock hazard analysis shall determine if work practices and protective equipment employed will reduce the risk of electrocution to an acceptable level. For voltages exceeding 750V AC the Electrical Technical Authority or HSSE Safety Advisor shall be consulted. For conductors or equipment using Direct Current (DC) the Electrical Technical Authority or HSSE Safety Advisor shall be consulted.

Note: If there is no Site Electrical Engineer assigned to the site, contact the Electrical TA or HSSE Safety Advisor.

8. The arc flash analysis shall determine the location of the arc flash boundary and the rating of the personal protective equipment that shall be worn. The latest USPL arc flash analysis is available in DRM. In addition, warning labels are placed on the external surface of the electrical equipment that indicated the required PPE for protection from the degree of existing thermal hazard and the arc flash boundary. Any discrepancy between the arc flash analysis available in DRM and the equipment labels shall be brought immediately to the Site Electrical Engineer attention for resolution.

9. If the arc flash analysis is not readily available in DRM, the Site Electrical Engineer shall be contacted to obtain the latest arc flash analysis for the site. In addition, if the arc flash analysis available in DRM has a date exceeding 5 years, contact the Site Electrical Engineer for the updated arc flash analysis. If an arc flash analysis is not available, a Cold Work - Energized Electrical Work permit cannot be issued.

10. Personnel exposed to shock hazards shall be trained in methods of safe release of victims from contact with exposed energized electrical conductors or circuit parts. Personnel responsible for responding to medical emergencies shall be trained in first aid and emergency procedures, cardiopulmonary resuscitation (CPR), and in the use of an automated external defibrillator (AED) if one is available. USPL requires a medical emergency responder to be available within four minutes to where energized electrical work is conducted.

11. Before beginning the work covered by the Cold Work - Energized Electrical Work, a job briefing shall be performed by the AO / AOD. The briefing shall cover such topics as hazards associated with the job, work procedures involved, special precautions, energy source controls, personal protection equipment requirements, and the information on the Energized Electrical Work Permit.

12. See the USPL Electrical Safety Policy for complete description of the energized electrical work requirements. For work within 10 feet of overhead power lines, contact the Electrical TA or HSSE Safety Advisor.

D. Movement of Heavy Equipment inside a Facility

The movement of heavy equipment within facility fence lines shall require a Cold Work Permit if it is:

- within 5' of above ground piping and equipment, unless the heavy equipment is traveling on an established facility roadway, or
- over underground piping, unless the heavy equipment is traveling on an established facility roadway.

Heavy equipment is considered to be equipment/vehicles that are greater than 15,000 lbs. (e.g. cranes, trackhoes, backhoes, tractor trailers)

A Cold Work - Movement of Heavy Equipment inside a Facility Permit shall verify the following precautions have been taken:

- surface and above-ground obstructions have been assessed to identify potential hazards and planned precautions such as routing and spotters, or
- weight of equipment footprint, capacity of the soil to support the equipment footprint, and piping depth have been considered in relation to the planned route. An evaluation shall be performed by Engineering if there is lack of experience with the crossing or uncertainty as to the safety of the crossing.

E. Radiation Source

Work involving radioactive sources such as working on analyzers or inline sources with unshielded radioactive sources shall require a Cold Work Permit. The requirements for work involving radiation sources are specified in the Radiation Safety Policy. Radiographic inspection (x-ray) or general routine inspections (e.g. visual device inspections or wipe tests) shall not require a Cold Work Permit.

- a) A Cold Work Permit shall be required for maintenance work on analyzers with a Radioactive Source.

Before breaking containment in close proximity of an inline radiation source or removing, replacing or repairing a radiation source, the following shall be verified:

1. The Control Center or other Operations personnel who monitor the device have been notified and approval has been granted for closing the shutter on the device (taking the device out of service).
2. Verification that the shutter is closed by using a survey meter and by confirming that the device screen reads zero or invalid.
3. The shutter has been locked and tagged per an approved Lockout Procedure.

For Cold Work - Radiation Source, the Asset Operator can validate the conditions as well as issue the Cold Work Permit to the Performing Authority via telephone. In such instances, the Performing Authority shall sign the Cold Work Permit on behalf of the Asset Operator.

F. Toxic Substance Exposure

A Cold Work Permit shall be required where there is the likelihood to exceed established regulatory exposure limits or USPL defined limits (i.e. when respiratory protection is required to prevent exposures above the 8 hour permissible exposure limits (PELS) or 15-minute short term exposure limits (STELS)). See the Toxic Substance Exposure Flow Chart in Appendix I.

Rescue and emergency service personnel using respiratory protection while performing emergency operations, and workers using respiratory protection voluntarily are exempted from the Cold Work - Toxic Substance Exposure Permitting process.

The following are examples of the types of tasks that can involve exposure to toxic substances above regulatory limits **or USPL defined limits**. This list is not all inclusive.

- Work in areas with LEL > 0%
- Confined Space Entry in spaces previously containing hazardous materials
- Welding, cutting, or grinding of alloy or coated metals
- Excavation entry with suspected contaminated soil
- Breaking containment of process equipment or piping
- Crude tank gauging
- Crude or product spill cleanup
- Sandblasting
- Hydroblasting
- Lead paint removal
- Coating removal
- Coating installation
- Asbestos disturbance

Other tasks involving toxic substances as determined by HSE Safety Coordinators or the USPL Industrial Hygienist can trigger the requirement for an exposure assessment per the Cold Work Policy.

For BP Employees preparing to perform tasks where there is a potential for exposure to toxic substances above regulatory limits **or USPL defined limits**, one of the following conditions shall be satisfied prior to start of work:

- The task has had a prior evaluation performed and is listed on the USPL PPE Matrix along with respiratory protection and/or other PPE requirements, if any.
- A documented interim evaluation has been performed by a HSE Safety Coordinator or the USPL Industrial Hygienist to determine if interim respiratory protection or other PPE is required.

For contractors preparing to perform tasks where there is a potential for exposure to toxic substances above regulatory limits **or USPL defined limits**, one of the following conditions shall be satisfied prior to start of work:

- The contractor shall provide an exposure assessment that documents what, if any, PPE shall be utilized. A HSE Safety Coordinator and / or the Industrial Hygienist shall document their agreement with the exposure assessment and the PPE to be utilized.
- If the contractor has no exposure assessment or HSE determines the assessment is insufficient, interim PPE requirements shall be established by the contractor until the contractor can perform an exposure assessment. A HSE Safety Coordinator and or the USPL Industrial Hygienist shall document their agreement with the interim PPE to be utilized.

For BP employees and contractors, where respiratory protection is to be utilized to perform tasks, a Cold Work Permit shall be required and the following shall be verified:

- The type of respirator to be used
- If the respirator uses a cartridge, the type of cartridge to be used
- A new cartridge has been installed at the beginning of the shift, if applicable
- The user(s) have been medically qualified to wear the respirator
- The user(s) have been fit tested for this respirator

- The respirator(s) have been inspected by the user prior to use

For additional information on toxic exposure, see the USPL Respiratory Protection Policy and the USPL PPE matrix.

G. Work at Heights

Anytime an individual's work height (when measured from the walking/standing surface at the current working level to next lower level) is 6 feet or greater where guardrails or a fall restraint system is not in place to prevent a fall.

Note: Climbing a ladder (6 feet or greater) does not require a working at heights permit; however working from a ladder where three points of contact are not maintained (at a height of 6 feet or greater) does require a Working at Heights permit

Note: A fall restraint system is configured such that an individual is physically prevented from falling over the leading edge, whereas a fall arrest system will stop the fall before the next lower level while minimizing deceleration stresses on the body.

Prior to working at heights, a Cold Work Permit shall be issued. The use of Personal Fall Arrest Systems (PFAS) or safety net systems for fall protection shall require a Cold Work permit as these systems do not prevent, only minimize falls. A Rescue Plan shall be completed prior to issuing a Cold Work – Working at Heights Permit. A template Rescue Plan can be found in Appendix III. Refer to the applicable Working at Heights policy for further requirements.

- Working on structures with systems and safeguards designed to prevent a fall to a lower level by means of guardrails or a fall restraint system shall not require a Cold Work Permit.
- Tasks performed on cone roof tanks where the individual is protected from the edge of the tank by guardrails shall not require additional fall protection or a Cold Work Permit (e.g. tank gauging next to the access platform). If however, the individual is required to cross the tank roof, or perform tasks in a location where the edge of the tank is not protected by a guardrail or fall restraint system, a Cold Work Permit and fall protection shall be required (e.g. work on high level alarms when they are located on the other side of the tank than the stairway platform or working on the vent in the middle of a cone roof tank).

6.2. Cold Work Permit Preparation

- A. Personnel possessing the technical and procedural competencies as defined by the USPL Control of Work Training and Competency Matrix (for employees) and the contractor management process (for contractors) shall participate in the development of the permit.

6.3. Cold Work Permit Issuance

- A. A Cold Work Permit shall be issued by the Asset Operator or AOD before any Permitted Cold Work is performed. The permit shall be issued by a single AO or AOD to a single Performing Authority (PA). If multiple AOs, AODs, or PAs are involved in the cold work permitted tasks, separate cold work permits shall be issued.
- B. Once the Cold Work Permit has been prepared, the Asset Operator shall review and sign the permit. By signing the permit and entering the permit in the permit register, the Asset Operator authorizes the work to proceed and accepts responsibility that the equipment has been prepared for the scope of work described in the document.
- C. Once the Performing Authority receives the signed Cold Work Permit from the Asset Operator or Asset Operator Designee, the Performing Authority shall sign the permit. By signing the permit, the Performing Authority accepts the responsibility to monitor the permitted work and shall verify that the work is performed within the conditions of the permit.
- D. For Cold Work – Radiation Source, the Asset Operator can validate the conditions as well as issue the Cold Work Permit to the Performing Authority via telephone. In such instances, the Performing Authority shall sign the Cold Work Permit on behalf of the Asset Operator.

Note: The Asset Operator shall enter the permit in the permit register before authorizing the permit.

- E. Self-permitting is prohibited.
- F. A permit is valid for one work shift for individuals working under the permit, or for the duration of the scope of work documented on the permit, whichever period is shorter.
- G. If cold work is suspended and the job site left unattended (including normal work breaks) during a shift, the permit shall be revalidated before further cold work can continue; revalidation involves the Performing Authority inspecting the cold work area for any change in previous conditions.
- H. If permit conditions are exceeded, work and the permit shall be suspended until the Asset Operator determines if changes can be made to the permit or if the permit should be cancelled and a new permit issued
- I. If the Asset Operator / Asset Operator Designee determines that changes to the permit can be made, he / she shall document their approval of the changes by initialing the changes where they are documented on the permit
- J. The Cold Work Permit shall be readily available at the job site until the cold work is completed or the permit has expired, whichever comes first.
- K. Any isolations (Lock Outs), overrides, or alarm suppressions associated with the cold work permit shall be entered into the permit register.

6.4. Work Completion, Permit Closeout and Document Retention

- A. The requirements at completion of the permitted work, including job site inspections, removal of risk control measures, reinstatement of isolations, asset operator briefing, permit register update and document handling are described in the ATW Policy.
- B. The original completed Cold Work Permits shall be retained locally for a minimum of one year.

7. Training and Competency

- A. All BP employees serving in roles defined in this policy shall be trained and competent for their assigned roles **as specified in the Training and Competency Matrix.**
- B. All contractors who perform work within the scope of this policy shall understand their specific roles and responsibilities and the purpose and use of the Cold Work Permit form.

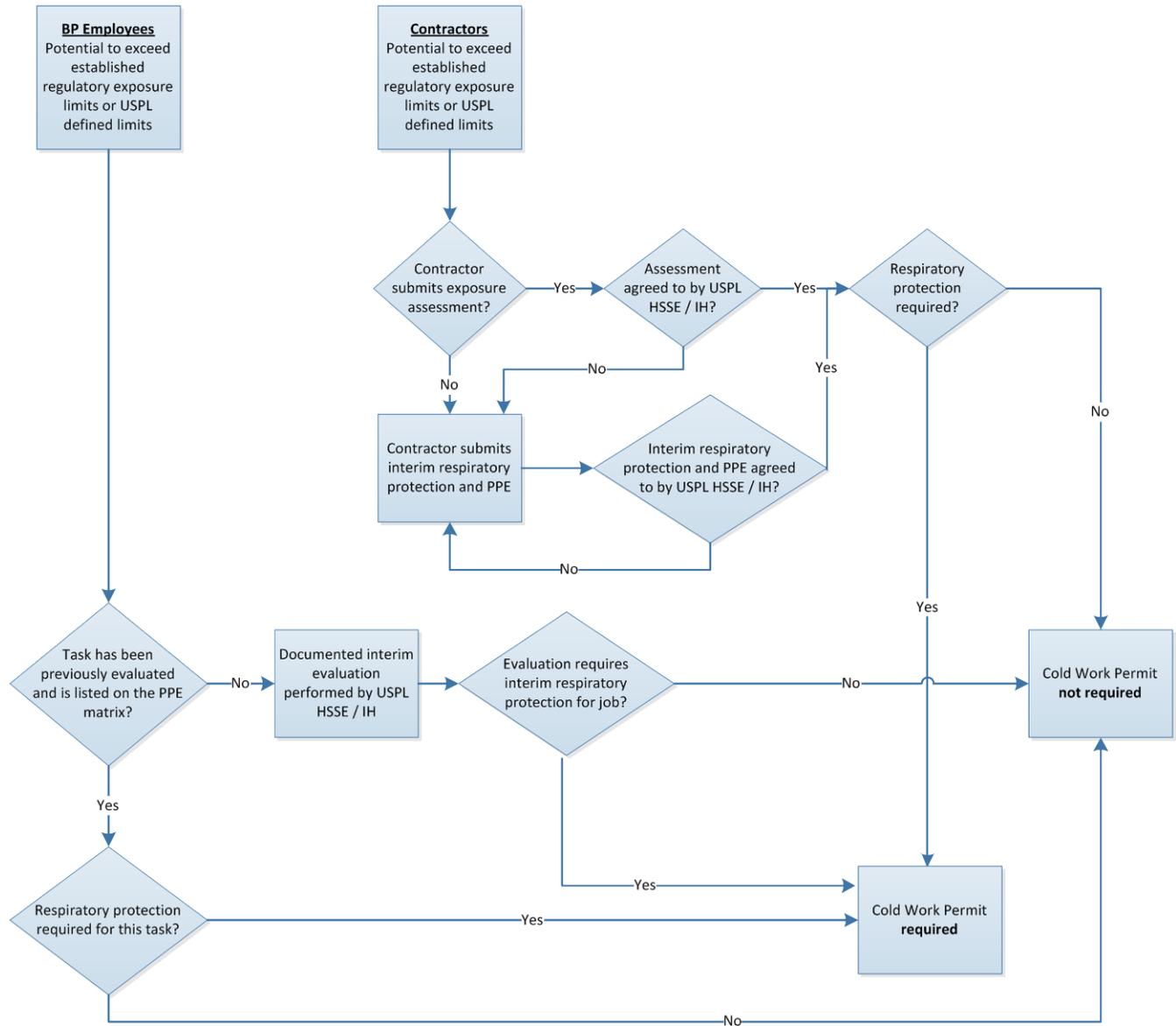
Note: Refer to the USPL Control of Work Training and Competency Matrix for specific training requirements.

8. References

1. GRP STD 02, BP Group Standards, Control of Work
2. GDP 4.5-0001, BP Group Defined Practice, Control of Work
3. Control of Work Group Standard, Permit to Work Process
4. USPL Control of Work Policy
5. The BP Operating Management System Framework
6. OMS Guide, Permit to Work

Appendix I

Toxic Substance Exposure Flow Chart



Appendix II

Cold Work Permit

This example of the Cold Work Permit is for reference only. Highlighting represents revisions made to the permit and will not appear on the printable form. For a downloadable version of the permit, go to the Documents and Records Management (DRM) site. The electronic version can be filled out online or printed and completed as a hard copy.

Permit Number: CW - [REDACTED]

Add the ATW Number associated with this job, add an alpha character if more than one Cold Work Permit is used per the ATW

Cold Work Permit			
(Use mm/dd/yyyy when entering dates. Use hh:mm am/pm when entering times.)			
A. General			
Date: [REDACTED]	Location: [REDACTED]	Time Issued: [REDACTED] am/pm	Time Expired: [REDACTED] am/pm
B. Permitted Tasks			
List each permitted task, location of the task, and any asset equipment affected by the task: [REDACTED]			
C. <input type="checkbox"/> Breaking Containment Pressure Relief			<input type="checkbox"/> Section not applicable
Note: Required while relieving pressure when relieving pressure through any fitting other than using a valve.			
Have breaking containment safety precautions been addressed in Level 2 HITRA?			<input type="checkbox"/> Yes
D. <input type="checkbox"/> Diving			<input type="checkbox"/> Section not applicable
1. USPL STP 78-215 Diving Specifications Reviewed? <input type="checkbox"/> Yes		2. Dive Plan Reviewed? <input type="checkbox"/> Yes	
3. The Diving Bridging Document has been approved per STP 78-215? <input type="checkbox"/> Yes			
E. <input type="checkbox"/> Energized Electrical Work			<input type="checkbox"/> Section not applicable
Note: Permit is not required when qualified persons work on systems < 50 volts or when testing, troubleshooting, and measuring voltage.			
1. Justification of why the circuit or equipment cannot be de-energized (demonstrate either Greater Hazard or Infeasibility): [REDACTED]			
2. Is the work performed by Qualified persons per NFPA 70E/OSHA 1910 Subpart S?			<input type="checkbox"/> Yes
3. Shock hazard analysis:			
<input type="checkbox"/> 50-300V AC			
Limited approach boundary: 3ft 6in Restricted approach boundary: Avoid contact Prohibited approach boundary: Avoid contact PPE required: See Electrical Safety Policy			
<input type="checkbox"/> 301-750V AC			
Limited approach boundary: 3ft 6in Restricted approach boundary: 1ft Prohibited approach boundary: 1in PPE required: See Electrical Safety Policy			
<input type="checkbox"/> >750V AC Consult Electrical Technical Authority or HSSE Safety Advisor.			
Equipment rated voltage:			
Limited approach boundary: Restricted approach boundary: Prohibited approach boundary:			
<input type="checkbox"/> DC Voltage Consult Electrical Technical Authority or HSSE Safety Advisor.			
Equipment rated voltage:			
Limited approach boundary: Restricted approach boundary: Prohibited approach boundary:			
4. Arc flash hazard analysis			
<input type="checkbox"/> < 4 cal/cm ² available incident energy			
Arc flash boundary: Minimum PPE required: Category 1			
<input type="checkbox"/> < 8 cal/cm ² available incident energy			
Arc flash boundary: Minimum PPE required: Category 2			
<input type="checkbox"/> < 25 cal/cm ² available incident energy			
Arc flash boundary: Minimum PPE required: Category 3			
<input type="checkbox"/> < 40 cal/cm ² available incident energy			
Arc flash boundary: Minimum PPE required: Category 4			
<input type="checkbox"/> > 40 cal/cm ² available incident energy			
WARNING: NO ENERGIZED ELECTRICAL WORK PERMITTED			
5. Means employed to restrict the access of unqualified personnel:			
<input type="checkbox"/> Safety Signs and Tags <input type="checkbox"/> Barricades <input type="checkbox"/> Attendants <input type="checkbox"/> Other: [REDACTED]			
6. Description of additional safe work practices to be used: [REDACTED]			
7. Electrical Technical Authority/HSSE Safety Advisor has been consulted if work performed within 10 feet of overhead power lines.			
			<input type="checkbox"/> Yes <input type="checkbox"/> NA
8. Personnel trained in methods of release of victims from electrical contact, first aid, and CPR available at jobsite?			
			<input type="checkbox"/> Yes
F. <input type="checkbox"/> Movement of Heavy Equipment inside a Facility			<input type="checkbox"/> Section not applicable
1. Have surface and above-ground obstructions been assessed to identify potential hazards and planned precautions? <input type="checkbox"/> Yes <input type="checkbox"/> NA			
2. Has weight of equipment footprint, capacity of the soil to support the equipment footprint, and pipeline depth been considered in relation to planned work? <input type="checkbox"/> Yes <input type="checkbox"/> NA			
If uncertain if safe, has an evaluation by Engineering been performed? <input type="checkbox"/> Yes <input type="checkbox"/> NA			

Permit Number: CW - []

G.		<input type="checkbox"/> Radiation Source (Analyzer-Radioactive Source)		<input type="checkbox"/> Section not applicable		
1. Radiation Safety Policy Reviewed? <input type="checkbox"/> Yes						
2. Have you notified and received approval from the Control Center or other Operations personnel who monitor the device to close the shutter? <input type="checkbox"/> Yes <input type="checkbox"/> NA						
3. Have you verified by using a survey meter and by looking at the screen displaying the reading from the device, that the shutter is closed (e.g. reads zero or invalid)? <input type="checkbox"/> Yes <input type="checkbox"/> NA						
4. Has the analyzer been LOTO'd? <input type="checkbox"/> Yes <input type="checkbox"/> NA		5. Have personnel received radiation safety training? <input type="checkbox"/> Yes				
H.		<input type="checkbox"/> Toxic Substance Exposure		<input type="checkbox"/> Section not applicable		
<input type="checkbox"/> H ₂ S <input type="checkbox"/> Benzene <input type="checkbox"/> CO <input type="checkbox"/> Total Petroleum Hydrocarbons <input type="checkbox"/> Lead <input type="checkbox"/> Asbestos <input type="checkbox"/> Other: []						
Describe source of toxic substance(s): []		Peak concentration of toxic substance(s): []		<input type="checkbox"/> NA		
Respirator User Name & Role	Respirator Type To Be Used?	Cartridge Type To Be Used?	New Cartridge Installed before use?	User Medically Qualified to wear respirator?	User Fit Tested?#	Respirator Inspected?
[]	[]	<input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes
[]	[]	<input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes
[]	[]	<input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes
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[]	[]	<input type="checkbox"/> NA	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> NA	<input type="checkbox"/> Yes
*NA may only be checked if using a respirator that does not require a fit testing (e.g. sandblast hood).						
I.		<input type="checkbox"/> Work at Heights		<input type="checkbox"/> Section not applicable		
Working on structures with systems and safeguards designed to prevent a fall to a lower level by means of guardrails or a fall restraint system shall not require a Cold Work Permit.						
1. If using a safety net system, is it designed in accordance with 1926.502(c)? <input type="checkbox"/> Yes (skip to Question 10) <input type="checkbox"/> No (continue to next line)						
2. Personal Fall Arrest System (PFAS) is to be utilized? <input type="checkbox"/> Yes (answer remaining questions) <input type="checkbox"/> No (skip to Question 10)						
3. Personal Fall Arrest System (PFAS) components are inspected and in proper working order? <input type="checkbox"/> Yes						
4. 100% tie off at all times? <input type="checkbox"/> Yes						
5. Free fall distance is limited to no more than 6 feet and deceleration device to no more than 3.5 feet? <input type="checkbox"/> Yes						
6. Fall Clearance Distance will allow a fall without contact to the next lower level or obstruction? <input type="checkbox"/> Yes						
7. The potential for swing falls have been evaluated and limited? <input type="checkbox"/> Yes						
8. Has it been verified that anchor points for fall arrest systems are capable of withstanding 5000 lb per individual attached? <input type="checkbox"/> Yes						
Identify anchor point(s) and locations and methods of verification: []						
9. If there is a risk of objects falling on personnel, have measures been implemented to protect personnel from being struck? <input type="checkbox"/> Yes <input type="checkbox"/> NA If yes, describe: []						
10. Rescue measures are in place if a fall occurs? <input type="checkbox"/> Yes Describe or attach rescue plan: []						
J.		Additional Permit Requirements		<input type="checkbox"/> Section not applicable		
List any additional precautions or requirements due to unusual conditions or circumstances: []						
K. Authorizing Signatures						
Asset Operator (or Asset Operator Designee)						
I have reviewed the completed permit, and based on my review of the documented conditions with respect to the scope of work and affected equipment I believe that asset equipment involved or affected by this work has been prepared for this scope of work and that it is appropriate for the work to proceed. I have reviewed the Level 2 HITRA (if applicable), agree that it is appropriate for this scope of work, verify it identifies Cold Work in the Permit Type(s) section, and that it has been properly approved. I understand that if permit conditions are exceeded and changes to this permit are necessary, I am responsible for documenting my approval by initialing where the changes are made. (Leave this signature line blank if issuing permit via telephone)						
AO/AOD (print and sign): []				<input type="checkbox"/> NA Phone validation below		
Performing Authority						
I have read and understand the above conditions and precautions. I understand I am responsible to instruct individuals performing work under this permit to read, and to document their understanding of, this permit. I understand I am responsible to stop work if I become aware that conditions of this permit are exceeded, and to notify the AO/ AOD upon completion or interruption of this work. I understand that upon interruption of work or if the job site is left unattended, I am responsible for reassessing the work environment and to revalidate the permit conditions before work resumes, or I will cancel the permit. If changes to this permit are necessary, I understand the Asset Operator or Asset Operator Designee shall approve them by initialing where the changes are made, and that I shall communicate them to the workforce.						
Performing Authority (print and sign): []						
Performing Authority (Radiation Source) Phone Validation of Permit with Asset Operator				<input type="checkbox"/> NA		
I have contacted the Asset Operator and have communicated the conditions of the above completed permit. The Asset Operator has verified the permit conditions and has authorized me to sign on his/her behalf to issue this permit.						
Performing Authority signature on behalf of the Asset Operator: []						

Appendix III Working At Heights Rescue Plan

General			
Date:	Location:	Jobsite:	Prepared by:
Rescue Plan			
Rescue By: <input type="checkbox"/> Self Rescue <input type="checkbox"/> Rescue Service Team <input type="checkbox"/> Contractor Team <input type="checkbox"/> Fire Dept. <input type="checkbox"/> BP Team <input type="checkbox"/> Joint Team <input type="checkbox"/>			
Rescue Team Leader:		Contact Method/Number:	
Rescuer:		Contact Method/Number:	
Rescuer:		Contact Method/Number:	
Rescuer:		Contact Method/Number:	
Location of Rescuers on Stand By: <input type="checkbox"/> At Jobsite <input type="checkbox"/> At Site <input type="checkbox"/> Offsite <input type="checkbox"/> NA (self rescue)			
Estimate of time required to affect rescue upon notification:			
Describe detailed rescue scenario(s) including sequence of events, individual duties of team members and communication methods:			
Rescue Equipment Required: (check all that apply)			
Victim Access: <input type="checkbox"/> Ladder <input type="checkbox"/> Man lift <input type="checkbox"/> Fire Truck Ladder <input type="checkbox"/> Fire Truck Boom <input type="checkbox"/> Self Retracting Lifeline <input type="checkbox"/> Hoist/Winch			
Victim Movement: <input type="checkbox"/> Backboard <input type="checkbox"/> Halfback <input type="checkbox"/> SKED Stretcher <input type="checkbox"/> Litter <input type="checkbox"/> Harness			
PPE: <input type="checkbox"/> Gloves <input type="checkbox"/> Boots <input type="checkbox"/> Level A-B-C-D Suits <input type="checkbox"/> Harness <input type="checkbox"/> Other:			
Location of rescue equipment:			
Emergency Medical Services			
EMS Provider:		Contact Number:	