



# ALASKA EIP EXECUTION STANDARD

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0	5/01/2026	IFU	Jennifer Buchholz	Chantelle Birtwistle	Philip Susen
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## 1.0 PURPOSE AND APPLICABILITY

This standard establishes the minimum requirements for developing, implementing, and executing energy isolation procedures (EIPs). It provides the tools and methodology to evaluate hazards and determine the minimum isolation needed. It also defines pre-approved isolation schemes that the business unit has accepted through a documented risk assessment. This standard applies to ConocoPhillips Alaska owned operations and related facility assets. It may be used for non-production operations and facilities, but it is not required when alternative, approved methods are used. This standard does not apply to pre-approved routine maintenance tasks as defined by each facility. Pre-approved routine tasks are addressed in local SkillsNOW safe operating procedures (SOPs).

## 2.0 REFERENCE DOCUMENTS

The Energy Isolation Procedure Execution Standard is a stand-alone document and must be followed in conjunction with the following reference documents:

- ASH - [2026 Alaska Safety Handbook](#)
- SkillsNOW Operating Procedures - [SkillsNOW v10](#)
- Safe Work Practices - Carseals, Flexible Hose Management, Permit to Work - [HSE Portal](#)
- Corporate - Process Isolation Standard ([GESG-FAC-ES-002](#)), [Life Saving Rules Standard](#)
- OSHA - [1910.147](#)

## 3.0 ROLES AND RESPONSIBILITIES AND COMPETENCY

### 3.1 Responsibilities and Accountabilities

- **Site Leadership (All Levels)** – Conduct audits and field verifications. Leadership is accountable for workforce compliance with this standard and for ensuring direct reports are trained and competent.
- **Shift Supervisor / Willow O&M Superintendent (or Designee)** – Accountable for workforce compliance with this standard. Approve all isolations and ensure non-standard isolation documentation is attached to the EIP (Single Block Table or Variation Risk Assessment).
- **Senior Operator** – Review and approve EIPs if designated, ensuring proper schemes are selected. Elevate non-standard EIPs to Shift Supervisor if additional approvals are necessary.
- **Installer and/or Procedure Developer (Operator/Maintenance Techs)** – Review the work scope to determine the isolation boundaries. Develop the EIP based on the required methodology. Install isolation securely and in a manner that prevents movement of the isolation device (valve/breaker). Verify zero energy has been established according to this standard. Maintenance Tech isolations are limited to utility systems (air, nitrogen, glycol, hydraulics, potable water, fire water) and require approval from the Operations Supervisor.
- **Verifier “Cold Eye” (Supervisor or Designee)** – Independently verify that all energy has been identified, isolated, and zero energy has been established according to this standard. The verifier may only “verify” isolation points they personally did not install during isolation or de-isolation.

## 3.2 Competency

All stakeholders whose work is directly impacted by this procedure must be informed of the procedure and understand how they are affected. They must demonstrate competency through local competency assessments as defined by the Alaska Business Unit.

Individuals who have the authority to install, remove, or change an EIP are: Senior Operator, Operator, Maintenance Technician, or Designee that has been deemed competent (EIP Installer Trained). A trainee may install an isolation under direct physical supervision of a competent person; however, the competent person must be designated as the installer.

Individuals who have the authority to cold eyes verify an isolation are Supervisor or Designee that has been deemed competent (EIP Installer Trained).

## 4.0 ISOLATION METHODS AND SCHEMES / VARIATIONS

### 4.1 Selection of Isolation Methods and Schemes

The isolation method and scheme shall be evaluated and documented based on:

1. Process conditions affecting exposure risk (pressure, volume, and temperature).
2. The associated risk of harm to personnel or the environment by exposure, considering:
  - Flammability and toxicity (including oxygen deficiency)
3. Type of work, congestion, and location.

### 4.2 Process Isolation Minimum Requirements

The **minimum** isolation requirements are the following:

#### 1. Blinding (Positive Isolation):

Complete separation from energy sources is required for:

- a. Confined Space Entry
- b. Hot Work involving welding, cutting, brazing, or similar spark-producing work.
  - i. Exceptions include piping which has been exclusively in seawater or potable water, with no potential for hydrocarbon entry. See ASH Hot Work Standard.
- c. Long Term Isolations where process pipework is left open ended.

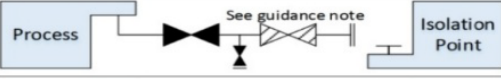
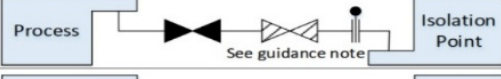

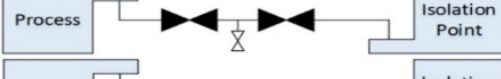
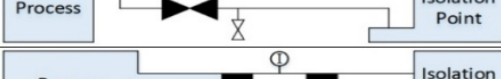
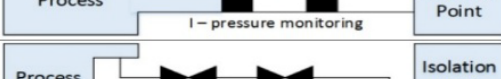
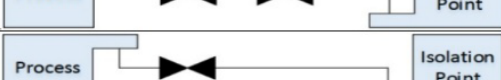

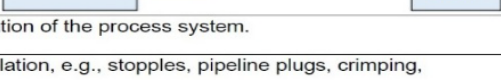



#### 2. Proven Isolations:

Proven isolation is required prior to breaking containment where energy sources may pose a risk to personnel or the environment. Valves, plugs, or other barriers must be checked to ensure they are functioning correctly by monitoring the pressure downstream of the barrier(s) or by confirming zero energy. Examples of proven isolation include:

- Double block or single block with a bleed that is proven zero energy.
  - All single block isolations require Supervisor approval prior to implementation.

#### 3. Non-Proven:

The Alaska BU requires proven isolations. Any deviations require a risk assessment (VRA) and approval based on the residual risk.

Isolation Methods	Guidance	Isolation Schemes	Illustration Example
I Blinding / Positive Isolation	Complete separation from energy source (blinding).	Blinding, Supported by Proven Isolation	
		Blinding, Supported by Non-Proven Isolation	
		Blinding, Supported by Non-Valve Isolation*	
II Proven Isolation	Use of block valve(s) or specialized tool (e.g. stopple) with verification.	Double Block and Bleed	
		Single Block and Bleed	
		Non-Valve Proven Isolation*	
III Non- Proven Isolation	Use of block valve(s) or specialized tool (e.g. stopple) without verification.	Double Block, No Bleed	
		Single Block, No Bleed	
		Non-Valve Non-Proven Isolation*	
	Represent an individual valve designed for controlled isolation of the process system.		
	Represent any specialized technique used for Process Isolation, e.g., stopples, pipeline plugs, crimping, freezing, etc.		
	Represents a valve that is not designed for controlled isolation of process fluids.		

\* Use of any specialized non-valve isolation techniques (e.g., stopples, pipeline plugs, crimping, freezing, etc.) requires an engineering assessment in accordance with Section 6.3 confirming the suitability of the proposed isolation technique.

### 4.3 Non-Standard Isolation Approvals

All isolations unable to meet the minimum requirements outlined in the standard require risk assessment and approval. The Variation Risk Assessment (VRA) as shown in [Appendix C](#) must document the risk level both before and after the mitigating measures are implemented. At a minimum, the risk assessment shall consider:

1. Energy sources.
2. Cause of variation and the resulting effect on the risk exposure.
3. Frequency and duration of the variance.
4. Implementation of additional risk-reducing measures.
5. Expansion of the isolation envelope.

If an acceptable risk exposure cannot be obtained, the work shall be postponed until all standard requirements can be met.

Single blocks that meet the requirements of the [Pre-Risk Ranked Single Block Table](#), as shown in [Appendix B](#) are exempt from completion of a VRA, as they have been pre-risk-ranked for Supervisor review and approval after considering frequency, duration, expansion of the envelope and deemed the prescribed mitigations acceptable for the specific isolation and task.

## 5.0 PROCEDURE

### 5.1 Procedure Applicability

A written Energy Isolation Procedure (EIP) is required unless **ALL** the following conditions are met:

- The work is completed within the same shift.
- The equipment has no potential for stored or residual energy, or for re-accumulation of energy after shutdown, that could endanger personnel.
- The equipment has a single, readily identifiable energy source that can be isolated with a single lockout device.
- Lockout and isolation of the energy source will fully deenergize and deactivate the equipment during maintenance or servicing.
- The lockout device remains under the exclusive control of the authorized employee.
- The service or maintenance activity does not create hazards for other employees.
- There has been no unexpected activation or re-energization of the equipment during previous use of this exception.

In these cases, the worker must attach a personal lock and tag directly to the energy isolation device. Operations may also apply a control lock, but this is not mandatory.

A written EIP is also not required if the isolation is a pre-approved routine task. These pre-defined tasks are covered under local [SkillsNOW v10](#) SOPs.

### 5.2 Plan and Prepare Procedure

#### **Responsibility: Responsible Preparer**

The preparer must understand the full scope of work requiring equipment isolation and develop an EIP strategy that ensures safe execution. Conducting a system walkdown is essential to confirm the accuracy of the isolation strategy. The preparer is not required to understand technical details of the scope beyond their trade.

#### 5.2.1 Plan the Isolation

Assess the complete scope of work associated with the isolation, including relevant work orders and MOC packages. If any aspect of the scope is unclear, consult with the planning team or craft personnel to resolve discrepancies. Choose the isolation method and scheme according to the work scope per the standard. The minimum isolation requirements are listed in the *Isolation Type and Criteria Table in Section 4*. If stronger isolation can be obtained, it is encouraged.

Identify all energy sources by conducting a system walkdown using the most accurate revision of the Drawings (P&IDs, Single Lines, Panel Schedules, Vendor Drawings, IFC package, Redlines etc.). If drawings are unavailable, a sketch may be used. Approval of this is documented via EIP approval.

- Identify all isolation and bleed points:
  - Walk the system to verify drawings (P&IDs/Single Lines/Panel Schedules etc.) accuracy regarding isolation points. Redline as needed.

- Consult outside crafts to identify isolation points outside your area of expertise, such as Electrical, Automation, or Instrumentation.
- Consider other potential energy sources: motion, radiation, gravity
- For equipment with multiple energy sources, ensure all sources are identified (e.g., electrically actuated valves with manual overrides).
- Identify valves that need carseal removal. If the carseal is also utilized by another piece of equipment, consult the Supervisor or Facility Engineer to determine mitigation steps per process hazard assessment (PHA) requirements.
- Evaluate piping breaks for heat trace pull back. In cold conditions, assess the risk of freezing to determine when circuits should be taken offline.
- Consider the potential for thermal expansion following isolation.
- Ensure bleeds and valves are accessible. Note any scaffold requirements.
- Consider the purge, drain, monitoring, and depressuring plans.

### 5.2.2 Drawing Mark-up

- Verify the accuracy of templated master isolations and drawings. Amend and update the template and drawings accordingly.
  - Mark up the P&IDs, electrical, or vendor drawings. The following color scheme is recommended for standardization; however, alternative color schemes are acceptable and may be recommended by each facility:
    - Indicate the inner isolation envelope in **light blue**.
    - Highlight isolation points (valves/blinds) in **dark blue**.
    - Mark points that require additional approvals in **red**:
      - Single block or double block without a bleed, globe valve use
      - Potentials for trapped pressure or liquid
      - Hot Work or Confined Space blinds that are not installed as close to the work location as possible
      - Hot Work or Confined Space blinds that are not installed
    - Highlight electrical isolation in **yellow**.
    - Highlight bleeds and valves open to maintain the flow path in **green**.
    - Label one or more bleeds in the work zone as “CRITICAL” or similar for daily zero energy verification.
    - Labeling is limited in ORM to 4 characters, so the following is recommended:
      - Valve – V, Bleed – B, Blind – X, Electrical – E

### 5.2.3 Develop the Procedure

- List the equipment name, number (technical object ID), and a detailed description of the work scope; supporting documentation may be attached as needed. List the Isolation Plan steps in sequential order:
  1. Communication: Develop a communication plan. Consider other impacted assets.
  2. Shutdown: Document shutdown steps or reference applicable procedures.
  3. Isolation of Energy Sources

- Define isolation steps in sequential order in accordance with the [ASH](#).
    - Prevent trapped pressure (check valves, twin seal valves, p-traps).
    - Ensure support systems are isolated in the correct order to prevent damage (e.g., seal systems taken offline last and reinstated first).
  - Document isolation devices that require additional approvals (e.g. “VRA or Single Block Table (SBT)” in the comment/remark section).
  - Document any valves that are normally car sealed in the comment/remark section (e.g., “Normally CSO or CSC”).
  - Consider documenting general location of the isolation points in the comment or the isolation point step verbiage.
  - Blind Management: Install blinds as close to the work as possible. Avoid incorporating hold points into the EIP. For blind installations, prepare a separate EIP for blind installation and another for work to be completed using the installed blind(s) as isolation point(s).
4. Zero Energy Verification:
- Detail the steps required to verify zero energy. Annotate bleeds/vents requiring daily verification (CRITICAL BLEED) to ensure energy has not reaccumulated within the isolation envelope.
    - ORM – Denote CRITICAL BLEED in comment section.
    - Heritage EIP – Shade gray on Bleed/Vent list.
  - Maintain path of continuity throughout the isolation scheme to ensure an unobstructed path to a bleed. Valves that “fail open” to maintain a path, must have the air/hydraulic/electric isolated as a device. Open manual valve(s) in the envelope path should be documented as bleeds, and they should be tagged open.
    - This requirement may be waived by the Shift Supervisor or Designee for valves that are normally open, difficult to access, or add burden without reducing risk (e.g. 3 stacked inline bleed valves in line of sight and in close proximity ~3 feet). The minimum requirement is that one of the stacked bleeds is tagged, with flagging secured from the tag to the other valve(s) not tagged to communicate the flow path.
    - Approval of waiver is documented by approval of the EIP.
5. Removal of Isolation and Return to Service (De-isolation Plan):
- Outline steps to remove isolation, close and plug bleeds, and restore equipment to normal service. Reference to startup procedures are acceptable.

5.2.4 Initiate a Risk Assessment of Non-Standard Isolation – [Single Block Table & VRA](#)

- Ensure all non-standard isolations are reviewed and risk assessed.
  - Potentials for trapped pressure or liquid
  - Hot Work or CSE blinds not installed as close to the work location as possible.
    - Alternative blind locations require Risk Rank 2 (RR2) approval per VRA
  - Any ASH Standard variance e.g. high energy Hot Work / Confined Space blinds not installed require (RR4) approval per VRA

- Non-proven single/double block or use of a globe valve
- Proven single blocks that do not meet the requirements of the table in [Appendix B](#)
  - Proven single blocks that do meet the requirements of the table are exempt from completion of a VRA, as they have been pre-risk-ranked for Supervisor review and approval of the assessment and mitigations.

### 5.3 Isolation Approval

#### **Responsibility: Shift Supervisor or Designee**

Once the procedure is written, the procedure must be authorized by the Shift Supervisor or Designee, which is typically the Senior Operator.

All non-standard isolations must be approved by the Shift Supervisor or Designee. The EIP developer is responsible for initiating the risk assessment (VRA) or completing the Single Block table and attaching it to the isolation.

The isolation approver is responsible for reviewing, approving, and ensuring:

- The isolation complies with both the EIP Standard and Energy Isolation Standard ([ASH](#)).
- All non-standard isolations are reviewed and risk assessed according to the standard.
- The work description and scope are accurately documented.
- The isolation effectively eliminates energy for the specified scope of work, preventing trapped pressure situations if procedures are followed.
- Energy isolation devices and bleeds are clearly described and identified within the EIP.
- Devices are accurately referenced on the drawings.

### 6.0 INSTALL ISOLATION AND VERIFY ZERO ENERGY

#### **Responsibility: Installer**

Once the procedure is authorized, it can be installed. The Installer is responsible for fully understanding the scope of work requiring isolation.

#### **Responsible Installer:**

1. Review the isolation to ensure it meets or exceeds all standard requirements, covers the defined scope of work, and has received necessary approvals.
2. Print the isolation, tags, and associated drawings.
3. Isolate and apply lockout/tagout (LOTO) to the system as specified in the EIP.
  - a. Sign off points as they are installed and make sure EIP tags are completely filled out.
4. Confirm zero energy for all sources.
  - a. Request assistance from qualified crafts to verify zero energy, as needed.
  - b. Visually verify zero energy at all end devices and bleeds.
  - c. Complete valve pressure buildup check per Single Block Table or VRA, as required.
5. Place the isolation lock keys in the lockbox. Install a control lock and information tag on the lockbox, identifying the associated job.
6. If changes are required, refer to the EIP Change Section.

### General Guidelines:

- Blinding Guidelines:
  - For any work involving a single block isolation, maintenance should be performed on location. If equipment removal from location is necessary, the maintenance crew must install a pressure-rated tapped blind flange or cap. The tapped blind flange allows zero energy verification when the blind is removed. This blind flange does not need to be tracked in the isolation software.
  - Blinds used for isolation must be rated to the design pressure of the piping system or equipment. Consider the use of bleed blinds where verification of zero energy may be required for blind removal.
- Multiple isolation points may be secured with a single locking device (daisy chaining); however, each isolation point must have an isolation tag attached, and all valves must be secured in an inoperable position.
- Disconnect energy sources from actuated positive shut-off valves (XVs) and confirm they remain in designated safe-out position. Electric, pneumatic, and hydraulic actuated valves with manual overrides or handwheels must be both electrically and mechanically isolated.
- Lock isolation valves that can be secured, ensuring they cannot be manipulated.
- Obtain assistance from other crafts for energy isolation as required; however, ensure the Installer (Operator) signs off the install step. Examples include:
  - Electrician support for isolating systems greater than 480 Volts.
  - Instrumentation assistance for relay cards, fuses, etc. Ensure relay cards and fuses are tracked on the EIP as isolation points to confirm systems are properly tracked.
- Verify Zero energy:
  - Obtain craft support to concurrently verify zero energy, where needed. Examples include:
    - Electrician assistance for verifying zero energy on heat trace, cathodic protection, block and tank heaters, and secondary electric heating pads.
    - Instrument assistance for relay cards, fuses, radiation, if necessary.
    - Mechanical stops installed (HRU rams, fin-fans, air handling units, turbines)
  - Obtain automation support for analyzing complex interlocks that could give a false indication of zero energy, if needed.
  - Visually confirm zero energy at the end device (e.g., pump or compressor) by attempting to start from all possible locations.
  - Use a rod out tool with appropriate pressure rated lubricator. Use an acceptable medium (e.g. nitrogen) that does not exceed pipe specs/pressure ratings of equipment.
  - Verify bleeds have open path/communication.
  - Avoid using needle valves or other small port valves as the bleed on the “working segment” except as a last resort.
  - Ensure hoses are cleared before connecting to bleeds and route them to a safe location appropriate for the process and site conditions.
  - Monitor bleed hose temperatures to prevent freezing, hydrate formation, or pressure re-accumulation. Refer to hose use policy in the [HSE Portal](#) as needed.
  - Consider energy sources that may tie into common atmospheric vent lines.

- If zero energy cannot be verified for a proven isolation scheme, consult the Shift Supervisor or Designee for further evaluation and risk assessment before proceeding.
- If any worker has safety concerns regarding the isolation, halt the process and notify the Supervisor to review and determine if the EIP should be amended.

## 6.1 Verify Isolation (Cold Eyes)

### **Responsibility: Supervisor or Designee**

The verifier must be familiar with the work scope and EIP Installer trained and competent. The verifier must not perform a cold eyes review on any device they personally isolated.

The primary objective of the cold eyes review is to ensure effective energy isolation and worker safety, rather than focusing on administrative compliance. The review should emphasize the physical aspects of the EIP: identification and isolation of all energy sources, and verification of zero energy. While the reviewer should note any obvious administrative errors, these are not the main focus.

Verifier must ensure:

- Isolation is correct for the scope of work and drawings are correctly marked up.
- All sources of energy have been correctly identified, are included on the isolation, and points have been accurately secured, isolated, and tagged/flagged.
  - The verifier must cross-check the equipment ID number on the Isolation to the equipment ID number on the actual equipment in the field (pump, breaker, etc.)
- The equipment is at a zero energy state and proper de-inventory of the system has occurred.
  - Request assistance from crafts as needed to verify zero energy. Ensure the craft signs off the cold eye verified step.
- All non-standard isolations are accurately identified.
  - Any changes to the Isolation or any additional non-standard isolations identified by the Verifier must be re-approved by the appropriate approval authority.

After verification that the isolation is installed and zero energy has been verified, sign off the cold eyes verification step(s).

## 7.0 APPROVALS & AUTHORIZATION FOR WORK

The operator must verify zero energy, sign the Isolation Worker Log, note any bleed changes (e.g. reopening any bleeds that were closed during night shift). The Operator must be the first signature on the Isolation Worker Log every shift.

## 8.0 WALKDOWN

### **Responsibility: Area Operator and Worker (Designated and/or Individual)**

The competent operator(s) and Designated/Individual worker(s) who jointly understand the scope of work must walk it down at the work location prior to signing the work permit to ensure:

- Scope of work is captured correctly on the EIP, and it is sufficient to cover the work scope.
- Isolation is installed, and equipment is in a zero-energy state.

## General Guidelines

The steps during a walkdown include:

- The Operator should explain the Isolation Worker Log expectations to the workers.
- The operator must demonstrate to the Designated/Individual worker(s) that the equipment is properly locked out, in a zero-energy state, and safe to proceed.
- The Designated/Individual worker(s) shares equal responsibility to ensure zero energy has been verified prior to starting work. After initial physical verification, workers are only required to verify zero energy at designated “Critical Bleeds” at the beginning of each shift. (Critical bleeds are the bleeds inside the work envelope that will be used daily to confirm zero energy.)
- Discuss worker requirements for single blocks that break containment for intrusive work:
  - Work must be performed continuously across shifts (day/night), or a surveillance plan must be implemented as specified in the VRA.
  - Workers must notify the operator whenever equipment is left unattended (e.g., for breaks, lunch, or reassignment).
  - Maintenance must be conducted on location. If equipment removal is necessary, a pressure-rated blind flange or cap must be installed.
- The Designated/Individual Worker secure the lockbox and sign onto the Isolation Worker Log.
- For work spanning multiple shifts, the designated worker(s) must install a control (craft) lock on the lockbox before starting work and keep it in place until the work is complete and the equipment can be returned to service. (Note: The control lock does not provide personal protection. Personal locks protect people and are removed at the end of each shift.)
- The operator should confirm that workers have signed onto the Isolation Worker Log.

### Safety:

- Any individual working on isolated equipment has the right to verify isolation points and install a personal lock on the lockbox.
- The Operator should communicate Simops concerns and VRA mitigations to the workers.
- Workers must contact Operators prior to the first break for any breaking containment activities.
- If the scope of work changes from what was discussed during the walkdown, the worker must **STOP** and contact Operations to determine if the isolation remains adequate. The permit and isolation must be updated to reflect the approved scope. If the isolation does not sufficiently cover the new scope, the EIP must be amended as outlined in the EIP Change section.

## 8.1 Individual Worker, Designated Worker, & Worker Responsibilities

- All Individual Workers/Designated Worker must:
  - Physically verify the isolation and zero energy (as described).
  - Install a personal lock on the lockbox.
  - Fill out the Energy Isolation Worker Log, putting a check mark designation for individual/designated worker.
  - Assign a group number. (See local facility guidance on group numbers. If there is no pre-assigned number for your group, then pick the next sequential number on the log.)
  - Sign onto the Permit.

- The Designated Worker must ensure that all workers in their group understand the energy isolation and is responsible for ensuring that workers properly sign in and out of the log daily.
- All Individual Workers must obtain permission from the Designated Worker to work under their lock and group. Upon receiving permission, the worker is required to sign into the IWL within the Designated Worker's group. The worker may also install a personal lock and verify isolation of energy if desired.
- When the Individual Worker/Designated Worker must leave (end of shift etc.), if the equipment is not safe to start, they shall apply a control (craft) lock to protect the equipment and/or process. They shall remove their personal lock.
- Prior to recommencing work, the Individual Worker/Designated Worker must:
  - Confirm with the Operator that no changes have been made to the Isolation and that the Operator has verified zero energy and signed the Energy Isolation Worker Log.
    - If changes have been made to the isolation, review the changes and confirm that the change does not compromise the energy isolation envelope.
  - Reconfirm zero energy at designated critical bleeds and re-attach a personal lock.
  - Complete the Energy Isolation Worker Log and sign the Permit.

## 9.0 MANAGING AND MONITORING VENTS AND BLEEDS

### Responsibility: Responsible Operator

It is the expectation of the Responsible Operator(s) to monitor isolations within their work area and check to ensure isolated valves are not leaking. Isolations that are not effectively monitored have the potential to expose workers to hazardous energy and cause process leaks/spills. Monitoring of the isolation integrity is required on all isolations. Managing open vent & drain valves:

- Vents and drains will remain in the open position and monitored during daily operator rounds while work is progressing.
- In the event of an emergency or immediate environmental impact, the person discovering the issues shall immediately stop work and notify the area operator and affected workers. The bleed may be shut if directed by the area operator and it is safe to do so. The Supervisor or Designee must immediately be notified.
- When maintenance work extends beyond shift, Operations should assess the risk of open vents and drains.
- If bleeds need to be closed while work is not progressing, but will be opened back up prior to recommencing work, perform the following:
  - After all workers have signed out of the Isolation Worker log, removed their locks from the lockbox, and turned in their permit, document that there has been an EIP Change on the Isolation Worker Log
    - **ORM** – Under the Isolation Worker Log change column, document the change (e.g. Bleed 1, 2, 4 Closed)
    - **HERITAGE EIP** – Update bleed log and insert entry on Worker Log - EIP Change see Bleed/Vent List. (Red entries are encouraged for all heritage EIP changes; however, highlighting the text is also acceptable.)

- Close and secure the bleed/vent(s).
- Prior to issuing any permits for the job, re-open the bleed(s), re-prove zero energy.
- The Operator must sign onto the Isolation Worker Log (First Signature), verifying that the bleeds are reopened and that zero energy has been re-established.
  - **ORM** – Under the Isolation Worker Log change column, document the change (e.g. Bleeds 1, 2, 4 Opened)
  - **HERITAGE EIP** – Update bleed log and insert red entry on Worker Log - EIP Change see Bleed/Vent List.
- The workers must reverify zero energy, and sign into the Isolation Worker Log.

## 10.0 ENERGY ISOLATION CHANGES

When circumstances call for the modification of an Energy Isolation, if workers have not signed onto the Isolation Worker Log but the EIP has already been approved, obtain permission from the original approval and amend the isolation. If isolation scheme is changed, ensure a Variation Risk Assessment is completed, if necessary. An EIP becomes active when the first worker signs onto the Isolation Worker Log and remains “ACTIVE” until EIP is formally removed. To modify an active EIP:

- Consult with the Shift Supervisor or Senior Operator regarding the proposed modification.
- Ensure all permits are closed, suspended, or placed on hold before making changes.
- Confirm all workers have signed out of the Isolation Worker Log (IWL) and all locks have been removed from the lockbox.
- Modify the isolation and reobtain necessary isolation approval(s) based on the new isolation scheme.
  - **ORM** - Modify the isolation electronically and reprint. See Isolation Manual for details.
  - **HERITAGE EIP** - Insert dated red entry on the device list “EIP Change” with description of change and approver Signature. Update device list.
- Re-verify zero energy.
- Document both the EIP change and the zero energy re-verification in the Isolation Worker Log.
- Review the modification with workers before re-issuing permits.
- Workers must re-verify zero energy again on the IWL and return their locks to the lockbox.

## 11.0 DE-ISOLATION

The Senior Operator or Designee will verify with the craft(s) and operator that all conditions for de-isolation have been met:

- All work is complete and associated permits are closed.
- All personal locks have been removed from the lockbox, and all personnel are signed out of the Isolation Worker Log.
- All craft locks are removed, confirming each department’s work scope is complete and the equipment is safe to return to Operations control.
- All SAP MOC prestart tasks are complete, if applicable.
- The custody transfer process for any capital project is complete, if applicable.

Once these conditions are satisfied, the Senior Operator or Designee will authorize de-isolation.

#### Operator Responsibilities During De-Isolation

- Close and plug all bleeds and vents.
- Remove locks from process isolation points and restore equipment to its normal de-isolated position.
- Reinstate all carseals.
- Flag or tag any valves not returned to their normal position, in accordance with the [ASH](#).
- Request craft support for any required de-isolation steps (e.g., heat trace, >480 Volt breakers, automation forces).
- Collect all isolation tags and sign off de-isolation steps.

#### Verifier Responsibilities During De-Isolation

- The verifier can only verify points they did not de-isolate. Confirm that the isolation has been removed, all bleeds are closed and plugged, and valves are returned to their normal position or properly flagged/tagged.
- Once verification is complete, sign off verification step for de-isolation.

#### Standby Mode and Close Out

- Perform purge and leak checks of equipment/system(s) based on the work.
  - Ensure support systems (e.g., seal systems) are reinstated prior to pressurization.
- Submit the EIP to the Shift Supervisor with the Isolation Worker Log for review.
- Verify all associated MOCs are in the proper status: Ready for Startup.
- Follow all equipment-specific and system procedures for startup or return to standby.

## 12.0 CONSTRUCTION, PROJECT WORK, AND COMMISSIONING & START-UP (CSU)

- All boundary isolations involving live operating facilities must be performed by the ConocoPhillips Operations and Maintenance Department, in compliance with this procedure.
- Any modifications to boundary isolations will be managed by Operations and this standard.
- Any isolations on equipment handed over from Capital Projects to Operations must comply with this procedure.
- Removal of Control locks by Capital Projects does not signify project completion. Project completion is only indicated by the sign-off of PSSR and transfer of control.

## 13.0 LONG TERM ISOLATIONS

### Long Term Isolations Management

Isolations that remain in place longer than 90 days are defined as a Long-term Isolations (LTI). Operations isolations must be tracked on IP21 LTI or ORM.

Non-Operations Installers must also review isolations that are not continuously worked to determine if they should be categorized as long-term isolations. These isolations must be monitored and documented using an approved tracking system.

Operations installed LTIs must be reviewed every 90 days. After 90-day LTIs are extended, they should be reassessed to determine whether they are suitable for decommissioning or reinstatement.

#### Review Periods (90-day Reviews):

- Operations Shift Supervisor or Designee will assess the remaining scope of work and the requirement for the isolation to remain isolated for another 90 days.
- Operations will verify that all isolation points have been installed and confirm the system is in a zero-energy state by inspecting bleeds to ensure no re-pressurization has occurred. Bleeds should be closed after verification has been completed.
- Shift Supervisor or Designee shall review the revalidated isolation certificate every 90 days.

#### LTI (Multiple 90-day Extensions or Indefinitely):

These long-term isolations should be reassessed:

- A review period assessment has deemed the isolation to remain in place for long term (indefinitely or multiple 90-day revalidation periods).
- Operations Shift Supervisor or Designee has assessed the isolation.
- Operations have assessed the isolation for permanent blind installation/spool removals and discussed a strategy for future re-instatement (if required).
- Operations have engaged engineering for MOC initiation for permanent decommissioning and layup plan and drawing updates (if required).

To remove an isolation from LTI designation and put into a “Live” state the following must occur:

- The isolation has been assessed for reinstatement to ensure any modifications have been reversed to put the isolation back in the original state.
- Operations to revalidate that all isolation points are still installed and the isolation is in a zero-energy state.
- Confirm the isolation is suitable for the intended scope of work and modified if required.
- Shift Supervisor or Designee shall review confirmed revalidated isolation certificate then remove the LTI designation and ensure a new 90-day review period is established.

## 14.0 DISCLAIMER

This document is not intended to address every potential scenario or prescribe every rule of safety and good practice. To ensure its effective application, all referenced policies, procedures, and standards (e.g., ASH) must be reviewed and understood in their entirety.

Questions related to interpretation or procedural application shall be elevated through the appropriate supervisory chain for clarification. It is not practicable to define every situation or condition under which this standard may apply; therefore, terms such as “normally,” “usually,” “etc.,” and “such as” are used where appropriate. Such language shall not be interpreted as a loophole, nor expanded to justify actions, conditions, or circumstances that are unsafe or otherwise inappropriate.

All personnel involved in the development, implementation, verification, or execution of an Energy Isolation Procedure (EIP) are expected to follow the applicable procedures as written. In the absence of an established procedure, work shall be stopped and guidance sought from the appropriate authority before proceeding.

Nothing in this standard is intended to replace the requirement for sound judgment and critical thinking by all individuals involved in the energy isolation process.

15.0 APPENDIX A – DEFINITIONS

<p><b>Active EIP</b> – An EIP that has been activated by the first worker signing onto the Energy Isolation Worker Log. The EIP remains active until the EIP is formally removed.</p>
<p><b>Affected Employee Per OSHA 1910.147(b)</b> – See Designated Worker, Individual Worker, and Worker</p>
<p><b>ALARP (As Low As Reasonably Practicable)</b> – Risk reduced to a tolerable level and managed with controls, where further reduction is not reasonably practicable (i.e., the additional time, cost, or effort is disproportionate to the added benefit).</p>
<p><b>Authorized Employee Per OSHA 1910.147(b)</b> – See Installer</p>
<p><b>Bleed/Vent</b> – Component used to verify zero energy and prevent potential energy re-accumulation. Bleeds/vents are an integral component of the energy isolation; however, they ARE NOT energy isolation devices.</p>
<p><b>Block Valve</b> – Acceptable valves for isolations are gate valves, ball valves, plug valves, twin seal valves, and needle valves.</p>
<p><b>Cold Eyes/Verifier</b> – Independently verifies that all energy has been identified, isolated, and zero energy has been established according to this standard. The verifier may only “verify” isolation points they personally did not install during isolation or de-isolation.</p>
<p><b>Control Lock</b>– A craft lock protects the process or equipment. It is not for personal protection.</p>
<p><b>Critical Bleed</b> – Bleed(s) located closest to the work, inside the inner isolation envelope designated as the location(s) for daily zero energy verification.</p>
<p><b>De-Isolation Verifier</b> – Responsible individual for verifying the equipment is correctly prepared for service (EIP removed, valves returned to normal or flagged, bleeds are closed and plugged etc.).</p>
<p><b>Designated Worker</b> – The worker who has been designated as responsible for a team or group working under an EIP. The designated worker assumes responsibility for the safety of the people working under them. This person reviews the Isolation with Operations and confirms zero energy for all equipment in the work scope. They also ensure that each worker in the group is notified of their right to verify the isolation. The designated worker must not sign out of the Energy Isolation Worker Log until all workers in the group have confirmed completion for the day and are signed out of the worker log. The designated worker is an “affected employee” as defined in OSHA 1910.147(b).</p>
<p><b>Designee</b> - A person who is delegated by a higher authority to complete a specific task.</p>
<p><b>Double Block and Bleed (DBB)</b> – An isolation arrangement consisting of either a double seal in a single valve body with a bleed in between, or two valves in a series—closed and tagged—with the pressure between the valves bled through an open and tagged vent. Double block and bleed (DBB) configurations are considered proven isolation.</p>
<p><b>Drawings</b> - Technical documents that could include P&amp;IDs, electrical single-line diagrams, panel schedules, vendor drawings, redlines, etc. used to identify energy sources/storage devices.</p>
<p><b>Energy Source</b> – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.</p>

<p><b>Energy Isolation Procedure (EIP)</b> – A procedure that contains all the isolation points to ensure that a proper isolation of equipment occurs for the prescribed work scope. It includes a documented strategy for safely isolating equipment including a combination of marked up P&amp;ID's, identified isolation points, and attached written plan to ensure a zero-energy state of equipment.</p>
<p><b>Energy Isolation Worker Log</b> – A tracking log used to communicate to work groups that the energy isolation is installed and zero energy has been verified by the Operator. The Operator should always be the first person to sign into the log each shift. The log is also used to track and communicate EIP changes, track Designated Worker groups and Individual Worker sign-in/out.</p>
<p><b>Heritage EIP</b> – EIP template used in lieu of the new electronic tool (ENABLON - ORM).</p>
<p><b>Hold Point</b> - A Hold Point in an EIP is the practice of isolating a portion of a process to install a blind and then proceeding to continue the isolation of the process beyond this blind on the same EIP. Blind install should be a separate EIP. Hold Points must be approved by the Supervisor.</p>
<p><b>Individual Worker</b> – The individual worker is a worker who is performing a task on their own. They are not working under a designated worker, and have the same responsibilities as the Designated Worker regarding daily zero energy with the Operator. The Individual is an “affected employee” as defined in OSHA 1910.147(b).</p>
<p><b>Installer and/or Procedure Developer</b> – The individual responsible for installation of the EIP and the establishment of zero energy. This is typically the Project or Area Operator at the time the EIP was installed. The Installer is a “authorized employee” as defined in OSHA 1910.147(b). Maintenance Installers are limited to utility systems (air, nitrogen, glycol, hydraulics, potable water, fire water) and require approval from the Operations Supervisor.</p>
<p><b>Intrusive Work</b> - Any activity that involves breaking the pressure containment envelope of piping or equipment. Examples include separation of flanges, cutting into isolated piping, breaking the barrier of a confined space, or opening equipment without valves.</p>
<p><b>Isolation Envelope</b> – The area between the inner most blocks (the process intrusion location).</p>
<p><b>Isolation Method</b> – A method of implementing a Process Isolation which includes blinding, proven isolation, and non-proven isolation.</p>
<p><b>Isolation Scheme</b> – The design of an isolation method.</p>
<p><b>Lock Box</b> – Typically red in color, the metal containers that secure keys from locks that directly secure field isolation points.</p>
<p><b>Long Term Isolation</b> – An isolation that is in place for longer than 3 months (90 days).</p>
<p><b>Non-Proven Isolation</b> – A valved isolation with no provision to confirm the effectiveness of valve closure prior to breaking into system. A physical isolation where the effectiveness of the chosen Pressure Barrier(s) is/are not verified.</p>
<p><b>Operations Control Lock</b> – A uniquely Operations (Orange) lock on the Lock Box verifying that the isolation is in place, as defined. It is the first lock on the lockbox and the last lock off.</p>
<p><b>ORM</b> – (Operational Risk Management) - Enablon electronic platform used to manage risk, ensure compliance, and improve safety. It is utilized for electronic energy isolation.</p>

<p><b>Personal Lock</b> – An individually keyed lock applied to a lockbox or isolating device providing control of the isolation to protect workers. Each worker must work under either a personal lock or under a Designated Worker’s personal lock before proceeding to work.</p>
<p><b>Positive Isolation</b> – A physical method of completely isolating pressurized process. Examples include spectacle blinds, blind flanges, screw-threaded plugs, and the removal of spools. These devices ensure full separation and prevent unintended flow or release of process materials.</p>
<p><b>Pressure Buildup Check</b> – A check used to verify a valve is holding. The valve is isolated and the downstream envelope is depressurized to a zero-energy state via a bleed. The bleed is then isolated for 10–15 minutes, after which zero energy is reverified to confirm the valve is holding.</p>
<p><b>Proven Isolation</b> – A valved isolation where the effectiveness of the isolation can be confirmed via vent/drain points (bleeds) before breaking into the system. Physical isolation by valves, plugs or other barrier(s) with verification that the barriers are adequately functioning.</p>
<p><b>Responsible Operator</b> – Unit Operator assigned by the Shift Supervisors (or their delegate) to perform the equipment isolation. The individual must be deemed competent in both the Lockout and Tagout procedure and the specific area where the work is to be performed.</p>
<p><b>Single Block &amp; Bleed (SBB)</b> – An isolation method consisting of a single locked and tagged block valve with a bleed valve on the isolated (work) side to prove isolation point integrity.</p>
<p><b>Single Block Table</b> – A table of pre-risk-ranked single blocks for Supervisor review and approval after considering frequency, duration, expansion of the envelope and deemed the prescribed mitigations acceptable for the specific isolation and task. If additional mitigations are required or requirements in the table cannot be obtained, then a VRA is required. The table must be attached to the isolation. <a href="#">Single Block Table &amp; VRA</a></p>
<p><b>Variation Risk Assessment (VRA)</b> – A risk assessment of a situation where a lower-standard isolation method is required, differing from the baseline isolation standard or an additional hazard exists. Examples include non-proven isolations, use of globe valve, potential for trapped pressure, double block without a bleed, single block (unless on Single Block Table), confined space or hot work blinds not installed as close to the work as possible. The variation is permitted only when supported by a situation-specific risk assessment that has been reviewed and approved based on the residual risk. The VRA must document the pre-mitigated risk rank and the mitigated (residual) risk rank. The VRA must be attached to the isolation. <a href="#">Single Block Table &amp; VRA</a></p>
<p><b>Verifier</b> – Responsible for completing the “cold eyes” verification of zero energy. They are the final authority that validates isolation and confirms zero energy. Verifier roles and responsibilities are outlined in the Isolation verifier section. The verifier must be EIP installer trained.</p>
<p><b>Worker</b> – A worker is an employee working with a team to accomplish a task. All workers must fall under a designated worker, who holds the responsibility for the worker including verifying zero energy with the Operator. The worker must obtain permission to work under the designated worker. All workers have the right to verify the EIP and zero energy and install a personal lock. Any employee performing a task on their own is an “individual” worker and cannot sign into another team’s group. The worker is an “affected employee” as defined in OSHA 1910.147(b).</p>
<p><b>Zero Energy State</b> – When all sources of energy have been reduced to acceptable levels of risk. This includes (but not limited to): draining, depressurizing, displacement, venting, electrically isolated, and neutralizing.</p>

16.0 APPENDIX B – PRE-RISK RANKED SINGLE BLOCK ISOLATION TABLE

HSE Link - [Single Block Table & VRA](#)

Types	Process	Stable Operating Pressure	Unmitigated Risk Rank	Residual Risk Rank	Approved Method	✓ All That Apply
Hydrocarbon	Tree Casing Valve(s)	≤ 5000	RR3	*RR2	Single Block/Bleed	
	Lift/Fuel/Produced Gas Reinj. Gas	≤ 2000	RR3	*RR2	Single Block/Bleed	
	Miscible Injection Gas	≤ 2000	RR3	*RR2	Single Block/Bleed	
	Flare	≤ 150	RR3	*RR2	Single Block/Bleed	
	Oil	≤ 250	RR3	*RR2	Single Block/Bleed	
	Oil/Water/Gas Mixture	≤ 250	RR3	*RR2	Single Block/Bleed	
	NGL	≤ 100	RR3	*RR2	Single Block/Bleed	
	Diesel/Antifoam	≤ 150	RR2	RR1	Single Block/Bleed	
	Lube/Hydraulic Oil	≤ 150	RR2	RR1	Single Block/Bleed	
Water	Produced Water	≤ 2950	RR3	*RR2	Single Block/Bleed	
	Seawater	≤ 2950	RR3	*RR2	Single Block/Bleed	
	Fire/Potable Water	ALL	RR1	RR1	Single Block/Bleed	
Chemical	Methanol	≤ 20	RR2	RR1	Single Block/Bleed	
	Scale Inhibitor	≤ 20	RR2	RR1	Single Block/Bleed	
	Corrosion Inhibitor	≤ 20	RR2	RR1	Single Block/Bleed	
	Emulsion Breaker	≤ 20	RR2	RR1	Single Block/Bleed	
Utilities	Heating Glycol	≤ 300	RR2	RR1	Single Block/Bleed	
	Cooling Glycol	≤ 300	RR1	RR1	Single Block/Bleed	
	TEG (Lean/Rich)	≤ 500	RR1	RR1	Single Block/Bleed	
	Instrument/Utility Air	ALL	RR1	RR1	Single Block/Bleed	
	Nitrogen	≤ 1500	RR2	RR1	Single Block/Bleed	

**Work Type** - This table is for breaking containment work not involving hot work or confined space entry. Confined space and hot work require blinds.

**Valve Type** - Approvals are based on gate, ball, plug, and needle valves that are not actively leaking. Leaking valves require a VRA. Valves must be confirmed to be holding via proven isolations (e.g., bleed, vent, drain).

**RR2** - A (10 – 15) minute pressure build-up check is required for all RR2's with confirmed zero energy using bleed/vent/drain.

**Pressure** – The pressure is based on current stable operating pressure(s), not design pressure.

**Surveillance Plan** – Unless specified otherwise on permit, Operator must monitor bleeds during rounds. The Worker will monitor bleeds and must notify the Operator upon any signs of passing valves and when leaving the job site.

**Bleeds/Vents** - Must be routed to a safe location considering proximity to the body, breathing zone, and ignition sources.

**Permitting** – Any additional SIMOPS, PPE, and contingencies must be covered on the permit based on the job.

**VRA** - Any single block beyond prescribed limits requires a Variation Risk Assessment (VRA) documenting additional mitigating measures.

KEY: Low Risk (RR1) ■ Medium Risk (RR2) ■ Significant Risk (RR3) ■ High Risk (RR4) ■

**PRE-RISK RANKED SINGLE BLOCK VALVE ISOLATION ASSESSMENT**

Element	Description
<b>Task Description</b>	Breaking containment using a proven <b>single block valve</b> as the sole pressure-containing isolation.
<b>Isolation Method</b>	Single block valve with downstream bleed/vent/drain to safe location
<b>Operating Pressure</b>	Current stable operating pressure (not design pressure)
<b>Work Scope Limitations</b>	Excludes hot work or confined space entry.

**HAZARD IDENTIFICATION & RISK**

Hazard	Potential Consequence	Unmitigated Risk
Block valve passing or failure	Uncontrolled release of energy	Significant/Medium
Loss of monitoring or surveillance	Delayed response to failure	Significant/Medium


**REQUIRED MITIGATING MEASURES**

Control Category	Mitigation Requirement
<b>Valve Condition</b>	The valve must be an approved type (gate, ball, plug, needle), in good mechanical condition, and not actively leaking.
<b>Verification of Isolation</b>	All single blocks require confirmed zero energy using bleed/vent/drain. RR2 - Valve integrity leak check required via a (10-15) minute pressure buildup check.
<b>Bleeds / Vents</b>	Bleeds directed to a safe location considering proximity to body, breathing zone, and ignition sources, visible to worker and operator, and open unless otherwise specified.
<b>Surveillance</b>	Operator to monitor isolation during rounds. Workers continuously monitor bleed(s) while on task. Worker to notify operator when leaving the job for breaks/lunch.
<b>Human Factors</b>	The worker must be positioned out of the line of fire with clear egress.
<b>Administrative Controls</b>	Approved EIP. Job hazards, contingencies, and SIMOPS reviewed prior to work and covered on permit. Stop-work authority and escalation criteria emphasized. Duration, frequency, and expansion of envelope evaluated and prescribed mitigating measures are acceptable.
<b>PPE</b>	Standard PPE. Additional PPE as required for temperature, chemical, H <sub>2</sub> S exposure etc. specified on the work permit.

**MITIGATION RISK EVALUATION**

Risk Element	Rating
Consequence (Post-Mitigation)	Significant/Medium
Likelihood (Post-Mitigation)	Unlikely
<b>Residual Risk</b>	Medium (RR2)/Low (RR1) – ALARP - Tolerable with prescribed controls

17.0 APPENDIX C – VARIATION RISK ASSESSMENT (VRA)

	<h2 style="margin: 0;">Process Isolation Variation Risk Assessment (VRA)</h2> <p style="margin: 0; color: blue; font-weight: bold; font-size: 1.2em;">(VRA LINK)</p>							
<p style="color: red; font-weight: bold; margin: 0;"><i>Applicability: Required for non-standard isolations, trapped pressure/liquid, globe valve use, ASH deviations, confined space/high energy hot work blind deviations, double block no bleed, single block (unless on single block table). A single VRA is required for each EIP and does not need to be completed for individual isolation points.</i></p>								
Name:								
Date:								
Equipment and Job Description:								
<b>Can the work be deferred until a planned shutdown or the isolation envelope extended?</b>								
<b>What energy sources are involved with the variance?</b>								
<b>What is the cause of variance?</b>								
<b>What is the frequency and duration of the variance?</b>								
<b>What is the initial risk rank, mitigations, and the subsequent reduction of risk (residual risk rank)?</b>								
Risks	Hazard or Safety Risk	Likelihood w/out Controls	Consequence	Risk Rank w/out Controls	Mitigations & Controls	Likelihood with Controls	Consequence	Residual Risk Rank with Controls
Safety								
Other								
<b>Approver(s) – Sequential approval required based on residual risk rank.</b> RR1 – Supervisor, RR2 – Supervisor/Safety, RR3 – Supervisor/Safety/OIM, RR4 – Supervisor/Safety/OIM/Ops Manager								
<b>RR1 (1 - 4)</b>	<b>Supervisor</b>	Print Name _____ Signature _____ Date _____						
<b>RR2 (5 - 10)</b>	<b>Safety</b>	Print Name _____ Signature _____ Date _____						
<b>RR3 (12 - 16)</b>	<b>OIM</b>	Print Name _____ Signature _____ Date _____						
<b>RR4 (20 - 25)</b>	<b>Ops Manager</b>	Print Name _____ Signature _____ Date _____						
NOTE 1: For hot work or confined space, blinds that cannot be installed as close to the work as possible require <b>RR2</b> approval. NOTE 2: Any ASH deviation (e.g. not installing blinds for confined space entry or hot work) requires <b>RR4</b> approval. KEY: Low Risk (RR1) <span style="color: green;">■</span> Medium Risk (RR2) <span style="color: yellow;">■</span> Significant Risk (RR3) <span style="color: orange;">■</span> High Risk (RR4) <span style="color: red;">■</span>								

## 18.0 APPENDIX D – RISK ASSESSMENT

Complete the Variation Risk Assessment (VRA). Safety Consequence type is the minimum requirement. If additional room is needed for the risk assessment, complete the ORM TJSA or utilize [Risk Assessment](#). See [Risk Assessment Awareness](#) for additional guidance. The risk matrix consists of a five-point consequence scale and a five-point likelihood scale. The consequence is multiplied by the likelihood to provide four risk levels requiring the following approvals based on residual risk post mitigating measures:

- **Low Risk (RR1)** (Risk Score 1 - 4) – Supervisor Approval
- **Medium Risk (RR2)** (Risk Score 5 - 10) – Safety Approval
- **Significant Risk (RR3)** (Risk Score 12 - 16) – Onshore Installation Manager (OIM) Approval
- **High Risk (RR4)** (Risk Score 20 - 25) – Operations Manager Approval

KEY: Low Risk (RR1) ■ Medium Risk (RR2) ■ Significant Risk (RR3) ■ High Risk (RR4) ■

Consequence Type	CONSEQUENCE LEVEL (C)				
	C1 - Negligible	C2 - Minor	C3 - Moderate	C4 - Major	C5 - Severe
Safety	• First aid case or less	• Medical treatment case, restricted workday	• Lost Workday Case without Permanent Impairment (See Appendix C)	• Permanent Impairment (See Appendix C)	• One or more fatalities and/or multiple hospitalizations
Environmental	• Release or event effects remain onsite or into secondary containment  • Impacts <1 month  • Within COP control	• Release or event effects remain primarily onsite and/or migrate offsite  • Impacts <1 year  • Within COP control	• Release or event effects primarily offsite  • Impacts <1 year  • Within COP control	• Release or event effects offsite and/or impacting an environmental or culturally sensitive area  • Impacts >1 year  • Beyond COP control	• Release or event effects offsite impacting multiple receptors and/or environmental or culturally sensitive areas  • Impacts >1 year without defined mitigation approach  • Beyond COP control
Total Financial (USD)	<250,000	250,000-2,500,000	2,500,000-25,000,000	25,000,000-50,000,000	>50,000,000
Stakeholder	<i>Negative Public Exposure/Reputational Damage</i>				
	• Posts on social media	• Trending on social media • Local News Coverage	• State/Provincial, Regional coverage (any duration) • National / International Coverage (< 1 week)	• National / International Coverage (> 1 week)	• National / International Coverage promoting regulatory or government commentary, intervention/action
	<i>Publics' Access Restriction</i>				
	<1 day	1 day - 1 month	1-3 months	3 months - 1 year	>1 year
	<i>Level of Stakeholder Engagement</i>				
	• Stakeholder engagement professionals		• Focused efforts with various business unit groups	• Requires Senior Level management Involvement	• Requires Executive Level Involvement

Consequence Type	LIKELIHOOD LEVEL (L)	CONSEQUENCE LEVEL (C)				
		C1 - Negligible	C2 - Minor	C3 - Moderate	C4 - Major	C5 - Severe
L5 Very Likely	•Event is expected to occur several times during the facility life	5	10	15	20	25
	•Similar events have occurred within the BU					
L4 Likely	•Event is expected to occur once during facility life	4	8	12	16	20
	•Similar events have occurred multiple times within ConocoPhillips					
L3 Somewhat Likely	•Event may occur during facility life	3	6	9	12	15
	•Similar events have occurred in the oil and gas industry or once within ConocoPhillips					
L2 Unlikely	•Event is doubtful to occur during the facility life	2	4	6	8	10
	•Similar event has occurred in the oil and gas industry					
L1 Very Unlikely	•Event is considered almost impossible to occur during facility life	1	2	3	4	5
	•Similar event not heard of in the oil and gas industry					

KEY: Low Risk (RR1) ■ Medium Risk (RR2) ■ Significant Risk (RR3) ■ High Risk (RR4) ■

[Link to ConocoPhillips HSE Risk Matrix Standard](#)

## 19.0 APPENDIX E – AUDIT PROCESS

### Scope and Applicability

This section applies to audit requirements of ConocoPhillips energy isolations procedures (EIPs) described in this standard. This section defines the minimum requirements for auditing EIPs to verify compliance.

### Audit Objective

The purpose of the EIP audit process is to document and address deficiencies to reduce risk to people and the environment due to inadequate EIP development, installation, and work execution. The audit process is designed to foster communication and learning within the teams to continuously improve the process by driving consistency and repeatability.

### Audit Process

**Monthly** – Completed and live EIPs will be reviewed by the Safety Representative using the EIP Audit Completeness Audit Checklist located on the [HSE Portal](#). The results will be tracked, and findings will be entered into the electronic audit software.

Findings will be reviewed with the workforce in tailgate meetings. The Supervisor will address any major, reoccurring deficiencies as needed.

**Annually** – A multi-disciplined team will be formed to complete an annual field audit. Recommended team members are: HSE, Operations, Maintenance, and an ad hoc member from another facility and/or technical authority.

The field audit team will perform the following:

1. Review or observe the execution of an isolation.
2. Identify deficiencies. Address any critical findings immediately.
3. Document findings using the Alaska Energy Isolation Focused Audit located on the [HSE Portal](#).
4. Enter findings into the electronic audit software.
5. Identify any action items and communicate to Shift Supervisors.
6. Address any major, recurring, or systemic deficiencies through electronic audit action items. If a major deficiency is discovered during the audit that constitutes an Incident/Near Miss, follow reporting requirements.
7. Review findings with the workforce.

The team will also evaluate documented deficiencies from the calendar year and propose updates to the EIP standard as part of the next revision cycle.

20.0 APPENDIX F – ORM ISOLATION WORKER LOG

 [ORM - Energy Isolation Worker Log.pdf](#)

ENERGY ISOLATION WORKER LOG – Isolation Certificate: _____											
<p><b>Operations is the first signature every shift, after verifying zero energy. If an EIP change occurred, it must be communicated to work crews via EIP Change Column (YES).</b></p> <p>Individual and Designated Workers must confirm zero energy every shift.</p> <p>The Designated Worker is responsible for his group's worker safety and must not sign out until it's confirmed that all workers under him have signed out. <b>See Examples below.</b></p>											
Date	Shift (Day or Night)	Company / Craft	Desig. or Individual Worker ✓	Group #	Worker's Name / Contact # (Please Print)	Worker Initial to Sign In	Designated Worker Initial to Verify Worker In	Worker Initial to Sign Out	Designated Worker Initial to Verify Worker Out	Did an EIP change or bleed change occur? If yes, explain change and current state. (e.g. Bleed 1, 3, 6 closed.)	Zero Energy Verification Complete (Area Oper, Ind. and Desig. Worker ONLY)
X/15/X	Day Night	COP/Ops		N/A	Operator Name (A) / #	N/A	N/A	N/A	N/A	N/A	YES
X/15/X	Day Night	COP/Inst.	✓	1	Individual Worker Name / #	IW	N/A	IW	N/A	N/A	YES
X/15/X	Day Night	COP/Mech.	✓	2	Desig. Worker Name / #	DW	N/A	DW	N/A	N/A	YES
X/15/X	Day Night	COP/Mech.		2	Worker Name / #	WN	DW	WN	DW	N/A	N/A
X/15/X	Day Night	COP/Ops		N/A	Operator Name (B) / #	N/A	N/A	N/A	N/A	YES – Bleeds 1,3,6 Closed.	N/A
X/16/X	Day Night	COP/Ops		N/A	Operator Name (A) / #	N/A	N/A	N/A	N/A	YES – Bleeds 1,3,6 Opened.	YES
X/16/X	Day Night	COP/Inst.	✓	1	Individual Worker Name / #	IW	N/A	IW	N/A	N/A	YES
	Day Night										
	Day Night										
	Day Night										
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