



COIMS Standard

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1 Purpose

This standard establishes requirements for the proper isolation and *control* of *hazardous energy* and *harmful substances*. This standard is intended for individuals accountable or responsible for hazardous work.

2 Application

This standard applies to hazardous work performed in Cenovus entities. This standard does not apply to electrical work required on an energized circuit performed by a qualified electrical worker.

3 Requirements

Energy and hazardous substances shall be isolated when:

- there is a potential for unexpected energization, start-up, or release of residual or stored energy from equipment and processes during servicing and maintenance
- a guard or other critical protection is bypassed, altered or removed
- workers are required to place any part of their body into a zone of danger around equipment to perform work at a point of operation

3.1 Roles and responsibilities

Entities shall assign the roles and their associated responsibilities listed in *Table 1*. Entities may use different titles and assign multiple roles to individuals, provided individuals are competent for the role.

Table 1: Roles and responsibilities

Role	Description
Isolating Authority (ISA): <ul style="list-style-type: none"> • Operators, Electricians, Instrumentation Technicians, and Mechanical Tradesmen 	<ul style="list-style-type: none"> • responsible for performing or overseeing the isolation of hazardous energy and preparing equipment for work • verifies that the hazardous energy source has been effectively isolated and a zero-energy state has been achieved
Performing Authority (PA) <ul style="list-style-type: none"> • anyone assigned to complete a task in the Control of Work process 	<ul style="list-style-type: none"> • in addition to the responsibilities in the <i>Safe Control of Work</i> standard, responsible to verify that the hazardous energy source has been effectively isolated, and a zero-energy state has been achieved

3.2 Isolation planning

All work shall have an isolation plan detailing the scope of the isolation, hazardous substances, hazardous energy sources, and isolation methods required to protect workers from the

unexpected energization, start-up, or release of stored energy from machines, equipment or processes during construction, start-up, servicing, or maintenance.

Isolation plans shall include, but not be limited to:

- affected equipment, machinery, process systems, or piping with name and unique identification or tag number (when present)
- relevant piping and instrumentation diagrams, single line diagrams, and other drawings
- identification of the points of isolation for the work
- steps to apply and remove isolation devices and the methods of energy isolation
- list of the approved procedures to apply the isolation

For isolations that are under direct and exclusive control of a worker where the energy isolation device or connection point is in direct control of the worker, a documented isolation plan is not required, providing the task is covered under a Safe Work Procedure or a Task Risk Assessment.

Entities shall have a procedure to define and manage:

- long term isolations
- isolation and documentation requirements for decommissioning

3.3 Isolation methods for piping, pipeline, and process systems

Entities may apply the following methods of piping, pipeline, and process isolation:

- positive isolation by blinding, blanking, or physical disconnection
- double block and bleed
- DIB1 *double isolation and bleed valves*
- DIB2 *double isolation and bleed valves* installed and used per manufacturer's specifications

Double isolation and bleed valves shall be used per manufacturer specifications. Double isolation and bleed valves that are only effective in one direction of flow shall only be used in that direction.

Confined space entry shall use blinding, blanking, or physical disconnection when attached piping or vessels contain harmful substances. If blinds are used, they shall be placed as close as practicable to the vessel.

Entities may apply single valve isolations to piping, pipelines, and process in the following circumstances:

- when they are required to install blinds and blanks, and the isolation has been proven to be effective
- when the material being isolated is not hazardous
- when it is not practicable to apply other isolation methods and the single valve isolation is approved by a competent Engineer as an alternate isolation method

The following valves shall not be used for isolation:

- pressure safety valves
- pressure control valves
- check valves
- choke valves

3.4 Isolation methods for electrical equipment, systems, and utilities

Isolation of electrical equipment shall be conducted in accordance with the applicable *Cenovus Electrical Safety Standard*, the Electrical Operating Authority, and applicable electrical regulations and codes.

3.5 Alternate isolation methods

Entities may use alternative isolation methods to those in this standard. Alternate isolation methods shall be approved by a competent Engineer.

3.6 Equipment blinding

Cenovus Entities shall have procedures for the installation, removal, and tracking of blinds.

The Isolating Authority shall verify isolation and zero-energy state prior to the installation of blinds or blanks.

Stamped pressure-rated blinds and gaskets shall be used for all blinding, in accordance with *AMSE B16.48*. *AMSE B16.48* applies to piping up to 24" NPS.

All blinds and spacers shall be marked to distinguish between blinds and spacers.

New gaskets shall be used when installing blinds, blanks, and spacers.

3.7 Securement (lock out tag out)

A lockout tagout system shall be in place requiring either:

- each worker to attach a personal lock and tag to each isolation device, or
- a group lockout system in which isolation points are secured and each worker attaches their own personal lock and tag to the group lock box, or
- a group lockout system with secure key control

Personal locks shall have only one key per device and workers shall maintain exclusive control of their key. Combination locks shall not be used for personal locks.

Operational or Trade lock sets shall be keyed alike, and there shall be only one key per set.

Workers shall install a tag on each lock and/or isolation point. The tags shall:

- be clearly visible
- be securely attached to the lock or isolation device

- be durable for the environment in which they are used
- indicate the date the lock and tag were installed
- be signed by the worker installing them

Alternatively, isolation points may be tracked in a log or register requiring:

- a tagging system which uniquely identifies each isolation device
- the date the isolation device was applied
- the name of the person applying the isolation device
- the status of isolation device (normally open or normally closed)

The Isolating Authority shall be the first to install their lock and/or tagout and the last person to remove their lock and/or tagout prior to reinstating the equipment, piping or pipeline back to service.

It is not always possible to apply a lock to electrical isolations on electrical utility systems. Such isolations shall be conducted in accordance with the applicable Cenovus Electrical Safety Standard, the Electrical Operating Authority, and applicable electrical regulations and codes.

For isolations that are under direct and exclusive control of a worker where the energy isolation device or connection point is in direct control of the worker, the use of locks and tags is not required providing:

- the worker has continuous control of each energy isolating device, which are immediately accessible and identifiable to the worker
- the worker does not leave the isolation unattended
- the energy isolation device is secured to prevent reenergization

3.8 Absent worker lock removal

Entities may remove locks of absent workers, provided:

- all reasonable efforts are made to contact the absent worker
- the safety and integrity of the process, piping, and equipment to be deisolated is verified before removing the lock(s).

Entities shall have a procedure for absent worker lock removal. The procedure shall:

- define the authority level required to remove an absent worker's lock(s)
- have a means to document:
 - the date and methods of the contacting or attempting to contact the absent worker
 - the date of removal of lock(s)
 - the name of the person removing the lock(s)

3.9 Verification

Prior to work commencing, the Isolating Authority and Performing Authority shall verify that hazardous energy sources have been isolated and that a zero-energy state has been achieved.

The Isolating Authority shall verify that the physical means of isolation are secured.

Any affected worker may ask to verify that a zero-energy state has been achieved.

3.10 Deisolation

Where tasks have involved breaking integrity or pressure envelope of piping, process systems, or rotating equipment, the integrity of the systems shall be confirmed to be restored.

Isolating Authorities shall verify the work is complete and disturbed piping, process, and equipment is ready to be returned to service prior to removing isolation devices and deisolating.

Isolating Authorities shall verify that all isolation devices have been removed and the equipment is ready to energize prior to returning equipment to service.

Changes in status of isolations shall be communicated to affected workers.

4 Related information

4.1 References

Table 2: Internal governing references

Document title or link	Relevance
COIMS Framework	Element 9 - Safe control of work
COIMS Standard - Safe Control of Work	hazard assessment and control
Cenovus Electrical Safety Standard	Legacy Cenovus Electrical Safety Standard
Cenovus Electrical Safety Standard	Legacy Husky Electrical Safety Standard
Life Saving Rules SharePoint site	Life Saving Rules SharePoint site

Table 3: Other references

Document title or link	Relevance
AMSE 16.48	applies to piping up to 24" NPS