

## **Overview of proposed amendments to**

### **Part 9: Confined Spaces**

#### **Section 9.18, Isolation**

#### **Section 9.22, Alternate procedures**

Section 9.18 sets out the methods which can be used to isolate adjacent piping from a confined space prior to worker entry. Because this section is intended to cover a wide range of circumstances, from the most to the least hazardous, the prescribed control measures assume the most hazardous confined space entries.

Section 9.18 (2) and (3) provide an artificial distinction between piping with substances above 15 psig and piping with substances below 15 psig. It is proposed that this distinction be removed.

Section 9.22 allows isolation measures other than those listed in section 9.18 to be used in specified circumstances provided these measures ensure equivalent protection to all workers exposed to the hazard. There are two concerns with the current wording. The first is the phrase “not possible”, and the second is the standard of “equivalent protection”. The proposal is to replace “not possible” with “not practicable”, and the second is to replace “equivalent” with “acceptable”. These changes will confirm that alternative measures can be used when strict compliance with section 9.18 is impractical and will apply a varying standard to the alternative measures which will be accepted by the Workers’ Compensation Board, depending on the hazard being addressed.

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## PART 9: CONFINED SPACES

### LOCKOUT AND ISOLATION

- Isolation**      **9.18**      (1) Except as provided in subsections (2) ~~and (3)~~, before a worker enters a confined space, adjacent piping which contains or has contained a harmful substance must be controlled by
- (a) disconnecting, blanking or blinding, or equivalent engineered system, or
  - (b) if the adjacent piping contains a harmful substance that is not a gas or a vapour, nor a liquid of sufficient volatility to produce a hazardous concentration of an air contaminant in the discharge of the piping, a double block and bleed system.
- (2) If adjacent piping contains or has contained a substance ~~at a pressure exceeding 100 kPa gauge (15 psig)~~ that is hazardous only because of its pressure, temperature or quantity, before a worker enters the space, the pressure must be controlled
- (a) to meet the requirements of subsection (1), ~~or~~
  - (b) provided there is no other pressure source or head pressure, by de-energizing and locking out the pressure source and depressurizing the line-, ~~or~~
  - (c) by other effective means.**
- ~~(3) If adjacent piping contains or has contained a substance at a pressure not exceeding 100 kPa gauge (15 psig) that is hazardous only because of its temperature or quantity, before a worker enters the space, the hazard must be controlled~~
- ~~(a) to meet the requirements of subsection (1), or~~
  - ~~(b) by other effective means.~~
- (4) Except when used in an acceptable double block and bleed system, the closing of one or more valves in a line is not an acceptable means of isolation.
- (5) Isolation of a confined space from gases found in a gravity-flow municipal or domestic sanitary or storm sewer system may be accomplished by a p-trap, provided that
- (a) the integrity of the trap is ensured immediately upon entry, and
  - (b) the atmosphere is continuously monitored and shown to contain clean respirable air.
- Isolation points**      **9.19**      (1) The employer must keep a record which identifies the location of every isolation point.
- (2) Every isolation point must be visually checked or otherwise verified to ensure that the confined space is effectively isolated before a worker enters the space.
- Blanks and blinds**      **9.20**      (1) Unless certified by a professional engineer to provide adequate safety for the particular conditions of anticipated pressure, temperature and service, a blank or blind must be manufactured in accordance with the specifications of one of the following standards:
- (a) *ANSI Standard API 590-1985, Steel Line Blanks;*
  - (b) *ANSI Standard ASME/ANSI B16.5-1988, Pipe Flanges and Flanged Fittings;*

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- (c) *ANSI Standard ASME B31.1-1992, Power Piping;*
- (d) *ANSI Standard ASME B31.3-1993, Chemical Plant and Petroleum Refinery Piping.*

- (2) If a blank or blind is certified by a professional engineer, the employer must keep a record of its certification, location and conditions of service.
- (3) If required, an allowance for corrosion must be made in the design of a blank or a blind.
- (4) A blank or blind must be stamped with or otherwise indicate its pressure rating.
- (5) If a line is to be opened for disconnection or to insert a blank or a blind, written safe work procedures must be prepared and followed to prevent hazardous exposure of workers to its contents.
- (6) Visual indication that a blank or blind has been installed must be provided at the point of installation.
- (7) If required to prevent leakage, gaskets must be installed on the pressure side of blanks or blinds and flanges must be tightened to make the blanks or blinds effective.
- (8) If threaded lines are used, threaded plugs or caps must be used to blind the lines.

**Double block  
and bleed**

**9.21**

If a double block and bleed isolation system is used

- (a) the diameter of the bleed line must be no less than the diameter of the line being isolated, unless certified by a professional engineer,
- (b) the bleed for a liquid system must be at a lower elevation than the block valves,
- (c) all valves must be locked out in their proper open or closed position,
- (d) the downstream block valve must be checked to ensure that it is capable of safely withstanding the line pressure,
- (e) the bleed must be checked to ensure that it remains clear of obstructions while the confined space is occupied, either by continuous automatic monitoring or by manually checking within 20 minutes before worker entry, or before re-entry after the confined space has been vacated for more than 20 minutes, and
- (f) in the event of discharge from the bleed line resulting from failure of the upstream block valve, all workers must immediately exit the confined space and the space must be effectively re-isolated before a worker enters the space.

**Alternate  
procedures**

**9.22**

- (1) If isolation using the measures specified in section 9.18 is not possible **practicable**, the employer may implement alternate measures, if acceptable to the Board, which ensure ~~equivalent~~ **appropriate** protection to all workers exposed to the hazard.
- (2) All workers affected by measures implemented under subsection (1) must be informed of the measures taken and instructed in any applicable work procedures.

**Discharge  
area**

**9.23**

The area of potential discharge from a disconnected line or from the bleed of a double block and bleed isolation system must be controlled to ensure that any accidental discharge will not present a hazard to workers.

### Explanatory Note

Because section 9.18 covers every situation arising from adjacent piping to a confined space ranging from high hazard to minimal hazard, the level of protection specified by section 9.18 assumes the highest hazards in order to protect workers in all situations. Section 9.22 allows an employer to implement isolation measures other than those listed in section 9.18 in certain circumstances.

Sections 9.18 (2) and (3) provide different control measures for adjacent piping when the substance in the pipe is over or under 15 psig and is hazardous because of its pressure, temperature or quantity. Since the distinction of pressure over or under 15 psig is artificial, the proposal is to delete the reference to the level of pressure in subsection (2) and to delete subsection (3) in its entirety.

The first proposed change to existing section 9.22 is to replace the word “possible” with “practicable”. “Practicable” is a defined term in Part 1 of the *OHSR* and means “that which is reasonably capable of being done”. In ordinary usage, “practicable” suggests that under present circumstances or by available means something can easily or effectively be done, while “possible” means that with suitable conditions and methods, something may be done. Using a defined term rather than ordinary usage is more precise and should be less confusing to readers.

The second proposed amendment to section 9.22 is to replace the word “equivalent” with “appropriate”. In ordinary usage, the word “equivalent” includes the concepts of equal to, comparable or approximately the same while “appropriate” includes the concepts of proper or correct.

Under the current regulation, alternate measures must meet a standard of providing “equivalent protection” to those specified in existing section 9.18. An “appropriate” standard would allow for a range of protective measures suitable to address the identified hazards, but would not necessarily equal the protection measures specified in section 9.18, as high hazards were assumed in section 9.18 in order to cover workers in a broad range of circumstances.

Changing the word “equivalent” to “appropriate” will allow the measures and level of protection to vary according to the circumstances. The alternate measures may not be the same as those prescribed in existing section 9.18, but in order to be “appropriate” they must provide the level of protection that is correct for the circumstances.