

# Change highlights: Explosives – Part 33 in the OHS Code

## OHS information for work site parties

This bulletin gives an overview of some of the changes in Part 33 of the [Occupational Health and Safety Code](#) (OHS Code).

### IMPORTANT

This is an overview of updates effective March 31, 2023. Consult the law directly to make sure you comply with all applicable requirements.

### KEY INFORMATION

- Part 33 describes the requirements for explosives used in all industries, as well as requirements that only apply to mine and mine sites and that only apply to underground mines.
- The explosives requirements that were found in Part 36 – Mining have been mostly consolidated with requirements in Part 33, although some requirements remain mining-specific.
- Other changes include:
  - Updates to technical standards and terminology to reflect current technologies.
  - Streamlined wording and consolidated requirements to improve clarity and remove duplication.
  - Clarified work site party responsibilities and updated terminology to align with the OHS Act.
  - New definitions for technical terminology used in the Part.

### Repealed, changed and new requirements

Most changes in Part 33 involve removing duplication; streamlining or revising wording to improve clarity and intent; or updates to technical standards to reflect current technology and best practices for health and safety.

In many sections, work site party responsibilities include both the “employer” and the “blaster.” Updated terminology to align with the OHS Act includes revising wording to reference a “report” instead of a “record.”

In addition, the requirements for mining and non-mining blaster certificates, as well as mining-specific requirements for explosives that were previously in Part 36, have either been moved to mining-specific sections of Part 33 or consolidated into Part 33 to apply to all work sites.

Several changes are new or amended requirements to strengthen health and safety protections and better reflect activities and conditions on Alberta work sites.

The following categories are some of the examples of the changes that have been made to Part 33.

#### Blaster’s report – Section 468.51

Record keeping requirements in Part 36 have been consolidated and revised to ensure that the necessary health and safety information is recorded. The blaster’s report requirements have been made applicable to all work sites where explosives are used.

#### Storage and disposal of explosives, fuse assemblies and detonators – Section 470.2

Requirements related to storage of explosives in Part 36 and Part 33 have been consolidated. The requirement to destroy explosives in accordance with manufacturer specifications (or to destroy them safely by a blaster if no specifications are available) has been made applicable to all explosives use.

A new requirement makes it clear that explosives must be stored in a magazine.

#### Access to explosives – Section 470.3

Requirements related to access to explosives have been moved here from Part 36 and made applicable to all work sites where explosives are used.

#### Removal from magazine – Section 470.4

The requirements for removal and transfer of explosives have been moved here from Part 36 and made applicable to all industries. Wording has been revised to clarify that explosives transported from the magazine to the work area have to be secured and used as soon as reasonably practicable.

#### Vehicle requirements – Section 473.1

Storage requirements in Part 36 and Part 33 have been consolidated and revised to align with the new definition of a “day box” or container. Requirements for weatherproofing have been revised to ensure explosives are protected from

damage during transport, and now apply to all work sites where explosives are being transported.

### **Vehicle breakdown – Section 473.2**

Requirements for transporting explosives have been revised to clarify that the explosives must be removed from the vehicle if it breaks down, unless:

- the repairs are minor;
- the repairs can be made without creating a hazard; and
- the vehicle can be repaired within a reasonable time.

### **Adverse weather conditions – Section 484**

Requirements for protecting explosives from detonation due to weather conditions have been revised to include all environmental conditions that could increase the potential for detonating explosives. In such conditions, the Part 36 requirement to stop blasting activities and withdraw workers to a safe area has been made applicable to all work sites where explosives are used.

### **Water damage – Section 486.1**

Requirements related to protection of explosives from water damage have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Quantity of explosives – Section 488.1**

The requirements related to regulating the amount of explosive needed for a bore hole have been moved here from Part 36 and made applicable to all work sites where explosives are used. Revised wording clarifies that the quantity of explosives loaded in a bore hole must be limited to what is necessary.

### **Testing detonators, circuits, and blasting machines – Section 495**

The requirements related to ensuring workers are a safe distance from the blasting area before testing is done have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Ignition precautions 497.1**

The requirements related to machinery involved in loading a bore hole with explosives or in the area of a blast hole have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Signs – Section 498.1**

The requirements related to signage have been moved here from Part 36 and made applicable to all work sites.

### **Blast protection – Section 499**

The requirements related to access to a blast area in Part 36 and Part 33 have been consolidated and revised to clarify that workers need to be a safe distance from a blasting area during blasting activities.

### **Burning explosives – Section 499.1**

The requirements related to burning explosives have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Blasting machine – Section 505**

The requirements for ensuring workers are at a safe distance before connections are made to a blasting machine have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Working around a misfire – Section 510.1**

The requirements for working around a misfire in Part 36 and Part 33 have been consolidated and made applicable to all work sites where explosives are used.

### **Secondary blasting – Section 517.2**

The requirements when conducting secondary blasting have been moved here from Part 36 and made applicable to all work sites where explosives are used.

### **Misfires – Section 517.995**

The requirements for removal of a misfire from a blast hole at an underground mine have been moved from Part 36 to the underground mine specific section of Part 33.

## **New and updated definitions**

The following new definitions have been added:

- “Blast hole” means a hole loaded with an explosive.
- “Blasting circuit” means a circuit consisting of blasting wire used to initiate one or more electric detonators.
- “Bore hole” means a drilled hole that does not contain explosives.
- “Container” means a fully enclosed storage receptacle made of a material that will protect explosives from damage or being detonated.

- “Controlled blasting” means a technique of blasting which is used to reduce the amount of over break, fractures, ground vibrations and other unintended damage.
  - “Day box” means a lockable weatherproof box that is made of non-sparking material, lined with non-conductive material, and used only for temporary storage of explosives intended for a specific blasting activity.
  - “Lead wire” means an electric wire connecting a power source or blasting machine to a blasting circuit.
  - “Perforating” means the use of explosives to perforate well casing to allow the flow of oil or gas into the wellbore.
  - “Secondary blasting” means the use of explosives to reduce the size of material that remains after an explosive is detonated.
  - “Seismic blasting” means a blasting activity used to collect geophysical data for the purpose of subsurface imaging.
  - “Shunt” means the act of connecting a piece of conductive material to the end of a leg wire of an electric detonator in order to prevent unintended detonation.
  - “Stemming” means the act of placing a non-combustible material in the portion between the top of the explosive column and the collar of a blast hole.
- industrial radiofrequency heaters;
  - equipment used for geophysical surveys;
  - radar;
  - overhead power lines; and
  - any other source of electromagnetic radiation.
  - “Leg wire” means an electric wire attached to a detonator.
  - “Magazine” means a building, storehouse, structure or place in which an explosive is kept or stored, but does not include:
    - a vehicle in which an explosive is kept for the purpose of transporting the explosive;
    - a day box; or
    - a container.
  - “Mine shaft” means an excavation at an angle of 45 degrees or greater from the horizontal that is usable:
    - for drainage or ventilation; or
    - as an entrance or exit for workers or mine materials to or from a mine or part of a mine.
  - “Misfire” means an explosive, or part of an explosive, that did not explode when detonation was attempted.

The following definitions have been updated:

- “Blaster” means a worker who holds:
  - a blaster’s certificate issued under Section 468.1, or
  - a blaster’s permit issued under the OHS Code or deemed to have been issued under the OHS Act by virtue of Section 69(2) of the act.
- “Blasting area” means the location at which explosives are being prepared, loaded, detonated or destroyed that extends at least 50 metres in all directions from that location.
- “Blasting machine” means equipment used to initiate detonation.
- “Blasting mat” means a heavy mat made of woven rope, steel wire, chain or other similar interconnected material, which is placed over explosives to prevent earth, rock, and debris from being thrown in the air by the detonated explosive.
- “Bootleg” means that portion of a blast hole that:
  - is not destroyed after an explosive is detonated in it; and
  - may or may not contain explosives.
- “Detonator” means any equipment used to detonate explosives, but does not include a blasting machine.
- “Electric detonator” means a shell containing a charge of detonating compound designed to be fired by an electric current.
- “Electromagnetic radiation” includes radiation used or found in association with:
  - broadcasting;
  - mobile communications systems;
  - remote control signal stations;

## Contact us

### OHS Contact Centre

Anywhere in Alberta

- 1-866-415-8690

Edmonton and surrounding area

- 780-415-8690

Deaf or hard of hearing (TTY)

- 1-800-232-7215 (Alberta)
- 780-427-9999 (Edmonton)

### Notify OHS of health and safety concerns

[alberta.ca/file-complaint-online.aspx](https://alberta.ca/file-complaint-online.aspx)

Call the OHS Contact Centre if you have concerns that involve immediate danger to a person on a work site.

### Report a workplace incident to OHS

[alberta.ca/ohs-complaints-incident.aspx](https://alberta.ca/ohs-complaints-incident.aspx)

### Website

[alberta.ca/ohs](https://alberta.ca/ohs)

## Get copies of the OHS Act, Regulation and Code

### Alberta King's Printer

[alberta.ca/alberta-kings-printer.aspx](https://alberta.ca/alberta-kings-printer.aspx)

### OHS

[alberta.ca/ohs-act-regulation-code.aspx](https://alberta.ca/ohs-act-regulation-code.aspx)

## For more information

OHS Code review

[alberta.ca/ohs-code-review.aspx](https://alberta.ca/ohs-code-review.aspx)

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