

# Maintaining Blasting Logs – Know the Laws of Your Province



**British Columbia, New Brunswick, Newfoundland and Nova Scotia have the strictest blasting log rules.**

Blasting operations involving the use of explosives are among the most hazardous activities undertaken at worksites. Not surprisingly, OHS regulations impose strict requirements to ensure blasting is carried out by specially trained and qualified blasting personnel following strict safety procedures and protocols. Among other things, blasters are generally required to keep and sign written logs listing key information about the blast and how it was performed. However, OHS requirements vary by province in terms of:

- The types of sites at which blasting logs must be kept;
- The information those logs must include; and
- How long logs must be retained.

Here's a summary of the requirements in each jurisdiction. Go to the OHS Insider website for a blasting log template and [game plan](#) to ensure compliance with logging requirements.

## OHS Requirements for Maintaining Blasting Logs

### FEDERAL

Explosives at a federally regulated oil and gas exploration, drilling, production, conservation, processing or transportation operation must be used, stored and controlled by a qualified person who makes a record of all the explosives they use, store or remove for use that's made readily available to the JHSC and lists: (a) the type and amount of explosives used, stored or removed for use; (b) the date of use, storage or removal; (c) particulars of the use of the explosive; and (d) the name of the qualified person who made the record (*Oil & Gas Occup. Safety and Health Regs.*, Sec. 11.27)

### ALBERTA

(1) Employer and a blaster must ensure that the blaster makes a report in a log book at the end of the blaster's shift listing: (a) the number of bore holes

loaded with explosives; (b) the number of detonators used; (c) the number of explosives detonated; (d) the kind and amount of explosives used; (e) the kind and quantity of explosives removed from a magazine; (f) the number and location of misfires; (g) the kind and quantity of explosives returned to a magazine; (h) the number and location of any explosives left undetonated; (i) the name of the blaster who entered the information into the report; (j) the date on which the information was entered into the report; and (2) A blaster must immediately report to an employer: (a) the suspected, attempted or known unauthorized entry into a magazine, or (b) the loss or theft of explosives or detonators from a work site, and the employer must then immediately ensure that the loss or theft of explosives from a work site is immediately reported to a police officer (*OHS Code*, Secs. 468.51 and 468.52)

## BRITISH COLUMBIA

(1) Blasting operation must be conducted or directed by the holder of a valid blaster's certificate issued by or acceptable to the Board or acceptable to the Board who's designated as the blaster of record responsible for the area and who keeps a blasting log listing: (a) the following **pre-blast loading** details: (i) the time, date and location of the blast; (ii) the name of the blaster of record and all other persons handling explosives; (iii) the type and weight of explosives used; (iv) the number of detonators used; (v) the type of initiating device used, and (b) the results of the **post-blast site examination** required by the Regs.; (2) Blasting logs must be maintained at the worksite, available for inspection by an officer, workers and worker representatives; (3) Employer must ensure that blasting logs are kept for at least 5 years after completion of the blasting operation; and (4) The blaster must maintain a personal log of all blasting work that the blaster has performed in the immediately preceding 5 years before the current date (*OHS Reg.*, Sec. 21.4)

## MANITOBA

A person or employer must, immediately upon discovery, report to the worker's employer and the Workplace Safety and Health Division: (a) a dangerous or careless act involving explosives; (b) an unsafe condition involving explosives; (c) an occurrence where the worker suspects that a fuse, detonator, blasting cap, detonating cord or other explosive might be defective; (d) the commission of a dangerous or careless act reported to the employer (e) the occurrence of a defective fuse, detonator, blasting cap, detonating cord or explosive, and the employer shall give the safety & health officer/mines inspector: (i) the name of the manufacturer thereof, (ii) if available, the packing slip from the original container thereof, and (iii) all other relevant information available (*Code of Practice for the Use of Explosives*)

## NEW BRUNSWICK

(1) Blast must be conducted or supervised by a blaster who holds a valid certificate of qualification in the blaster occupation or powderman trade issued under the *Apprenticeship and Occupational Certification Act*, and who maintains a log book recording the following: (a) **before the blast**: (i) job location; (ii) names of blaster and assistants; (iii) diagram of blasting pattern and sequence of firing; (iv) type and the amount of blasting explosives and detonators; (v) number, depth and placement of charges in each hole; (vi) resistance calculations for each series and circuit when using an electric means of

initiation; (vii) precautions taken to control fly rock, air blast and ground vibrations; (viii) placement of persons to guard the danger area; and (ix) reason for any delay in blasting; and (b) **after the blast:** (i) date and time of blast; (ii) weather conditions at time of blast; and (iii) results of post-blast examination for misfires and other dangers; (2) Blaster must keep above log book for 3 years after the last blast recorded in the log book and make the log book available for inspection by an OHS officer; (3) Employer must ensure that an employee in charge of a magazine maintains a log book for the magazine and records the amount of blasting explosives by type, detonators by period, leg wire length and series that are or have been stored in the magazine from the time the magazine was first used or for the 3 years before the date of the most recent entry, whichever is the shorter period; and (4) Employer must ensure that the log book referred to in subsection (1) isn't kept in the magazine and that it's made available for inspection by an OHS officer (*OHS Gen. Reg.*, Secs. 173-175)

## **NEWFOUNDLAND**

(1) A field journal or equivalent record must be provided at the blasting site and the blaster in charge must record the results of the blaster's examination on it; (2) Employer must ensure that a blaster keeps an updated field journal or equivalent record; (3) A blaster must keep blasting records for 5 years after a blast, and keep the records available for inspection by an OHS officer or employer at all reasonable times; (4) Employer must ensure that the employee in charge of explosive magazines maintains an inventory record, available to an OHS officer, that records, for each magazine, the amount of detonators and other explosives stored in the magazine for at least the 3 previous years and a copy of the inventory record must be kept at a place other than in the magazine; (5) The inventory record referred to in subsection (4) must include the following information: (a) for the detonators, the period, leg wire length and series; and (b) for other explosives, the type of explosives (*OHS Regs.*, Sec. 422)

## **NOVA SCOTIA**

(1) A blaster with direction and control of a blasting operation must make a blast log for the blast; (2) Employer must ensure that a blaster makes a blast log; (3) Blaster must give a copy of a completed blast log to their employer as soon as reasonably possible and, if reasonably practicable, before the end of the day on which the inspection conducted after the blast is concluded; (4) Employer must keep the copy of a blast log received from a blaster for at least 3 years after date of the blast; and (5) A blast log must include all of the following information: (a) date and time of the blast; (b) location of the blast; (c) name, address and telephone number of employer; (d) name, blaster certificate number and signature of the blaster who had direction and control of the blasting operation; (e) the distance from the nearest house, residence, shop, church, school or other structure occupied in whole or in part by people; (f) the distance from the nearest structure other than one referred to in clause (e); (g) how the blast was initiated; (h) the following drilling and loading characteristics for each hole or for each group of holes sharing the same characteristics: (i) hole identifier number, (ii) hole diameter, (iii) hole depth, (iv) burden (iv) burden, (v) spacing, (vi) quantity of explosives planned to be loaded in each hole, recorded in kilograms, (vii) total quantity of explosives planned to be used for the blasting operation, recorded in kilograms, (viii) type and length of stemming, (ix) type and brand of explosive, (x) type

of detonator; (i) a sketch of the loading pattern for the blast; (j) the total quantity of explosives actually loaded into each hole, recorded in kilograms; (k) the maximum quantity of explosives per delay, recorded in kilograms; (l) the specifics of the delay pattern; (m) the number of detonators used in the blast; (n) the period numbers of the detonators used in the blast; (o) the resistance in the electric blasting circuit as tested under subsection 78(2), recorded in ohms; (p) the type of warning signal used; (q) whether blasting mats were used; (r) whether warning signs were posted on all public roads near the blasting area, leading to the blasting area and leading from the blasting area; (s) whether all roads and approaches were guarded or barricaded; (t) the results of the inspection of the blasting area conducted after the blast; (u) whether a misfire occurred; and (v) whether there was any injury to persons or damage to property resulting from the blast (*Blasting Safety Regs.*, Sec. 13)

## **ONTARIO**

Person in charge of a primary blast at a surface mine must keep and sign a record setting out: (a) the date, time and location of the blast; (b) the wind direction and velocity at the time of the blast; and (c) the atmospheric conditions at the time of the blast (*Mines & Mining Plant Regs.*, Sec. 143)

## **PRINCE EDWARD ISLAND**

Blasting logs not expressly required by OHS regulations

## **QUÉBEC**

(1) Shot-firer must keep and sign a blasting logbook containing the information provided for in Schedule 2.2 of the Regs.; and (2) Employer must keep blasting logbook for 3 years and make it available at all times on the work site (*Safety Code for Const. Industry*, Sec. 4.7.10)

## **SASKATCHEWAN**

(1) Employer or contractor must appoint a person qualified in the use of explosives and who holds a valid security screening document to conduct a thorough weekly inspection of all magazines, day boxes,

daily records and shift logs pertaining to blasting activity, reconcile entries in the magazine log, daily record and the shift log to determine if all explosives, detonators and detonating cord are

accounted for, and countersign the entries; (2) The person appointed must submit a signed written

report to the employer or contractor summarizing the results of each inspection, including:

(a) the information required by subsections 11-18(3) and (4) of the Regs.; (b) any discrepancies resulting from reconciliation between the magazine log, daily record and shift log; and (c) any unsafe condition (*Mines Reg.*, Sec. 26-5)

## **NORTHWEST TERRITORIES & NUNAVUT**

Blasting logs not expressly required by OHS regulations

### **YUKON**

(1) All surface blasting operations must have a blaster's log that records the pre-blast loading details and results of the post-blast site inspection; (2) Blasting logs must be maintained for at least 5 years at the workplace and be available for inspection by workers, worker representatives, or OHS officers; (3) All blasters must maintain personal logs of all blasting work they perform and the personal logs must be available for inspection by an OHS officer (*WSCA Regs.*, Sec. 14.10); and (4) Every magazine at a mine or quarry must, on the surface, have a current inventory of its contents in a special log book and all entries must be signed by the authorized person in charge (*WSCA Regs.*, Sec. 14.28)