



Labour and Advanced Education



APPRENTICESHIP
NOVA SCOTIA

Blaster

Occupational Profile

Occupation: Blaster

January 2012

Scope of the Trade

Note: In Nova Scotia, blasters perform surface blasting.

Blasters assemble, place and detonate charges of explosives to loosen or break earth, rock, stumps or to demolish structures, primarily in construction, exploration, and quarrying applications. Their duties include preparing blast sites for drilling, planning and designing blast patterns, determining hole size and depth, estimating the amount and type of explosive to be used and controlling the adverse effects of blasting.

They are directly responsible for the handling, storage, transportation and usage of explosives and their accessories, maintaining blast and inventory records, and supervising blasting helpers and the security of the blast area.

Blasters are employed by mining, quarrying, and construction companies as well as by drilling and blasting contractors.

Blasters work primarily outdoors, sometimes in remote or hazardous locations. Working conditions are often noisy and dirty. The work week can vary from 40 to 60 hours. Overtime or weekend work can be required, depending on deadlines. Blasting work is often seasonal. Good hearing, eyesight, colour vision, hand/eye coordination and manual dexterity are all important, as are strength and physical fitness.

Safety is of prime importance, and blasters must be conscious of the impact on people, equipment, work area and environment when performing their work. There is some risk of injury from explosions, flying particles, falling objects, noise, hazardous chemicals and working around heavy equipment.

Some important attributes of the blaster include: an aptitude for math and science, good communication and analytical skills, and an ability to perform detailed and precise work. Some knowledge of computerized machinery may be helpful, as would an ability to follow safety procedures accurately and precisely, conducting tests and analyzing information, reading plans, working with others or independently, working under the supervision of others, and/or directing the work of others.

Experienced blasters may advance to supervisory positions but, without additional education or training, further advancement is limited.

Proposed Blocks and Tasks

Block A Occupational Skills

Task 1 Uses and maintains tools and equipment.

- Maintains and prepares equipment
- Uses products

Task 2 Organizes work.

- Follows legislation and regulations related to blasting

Task 3 Performs routine trade activities.

- Protects self and others

Block B Explosives Handling and Transport

Task 4 Stores explosives.

- Maintains blasting explosives, detonator magazines and inventories according to regulations

Task 5 Disposes of explosives.

- Destroys deteriorated, aged and unwanted explosives

Task 6 Transports explosives.

- Transports explosives according to appropriate regulations

Block C Planning, Site Preparation, and Setup

Task 7 Prepares blast area.

- Ensures the holes are in a safe condition to receive explosives
- Lays out the blast
- Inspects blast area

Task 8 Controls blast area.

- Organizes and supervises effective guarding of the blast site

Task 9 Develops and implements blast design.

- Interprets drilling plans
- Designs blast patterns
- Selects size of holes, burden, spacing, stemming, sub grade drilling, explosive and detonator type

Task 10 Loads blast holes.

- Selects and verifies drilling areas and size of holes
- Prepares and places a variety of primers in the blast holes
- Loads main column charges in the blast holes

Task 11 Controls fly rock.

Task 12 Monitors and controls vibration.

- Calculates and projects vibrations

Block D Blasting Processes

Task 13 Performs basic blasting operations.

- Performs mass blasts
- Performs quarry blasts
- Performs trench blasts
- Uses blasting equipment in a safe manner
- Hooks up and fires the blast with a variety of initiation methods
- Disposes of misfires

Task 14 Performs advanced blasting operations.

- Performs sinking cuts
- Performs pre-shearing

Task 15 Performs secondary blasting operations.

Task 16 Performs specialized blasting techniques.

- Performs blasting techniques that require a Code of Practice