



# Mine Rescue Certification Training Standard

The Newfoundland and Labrador, Occupational Health and Safety (OHS) Regulations, section 541 outlines the responsibility of an employer for mine rescue training. Section 541(f) states “An employer at an underground place of employment shall require that workers attend training courses in mine rescue work as prescribed by the commission.” OHS Regs., section 411(1) further states “A underground place of employment includes an underground mine as well as an excavation, natural entry, tunnel, raise, shaft or chamber, that is not a mine.”

This certification training standard provides minimum criteria for the development and delivery of a Mine Rescue Certification Training Program for Newfoundland and Labrador. It was developed in consideration of research findings, and the OHS Act and Regulations. In addition, Policy HS-03, Occupational Health and Safety Certification Training provides WorkplaceNL with the framework and guidance in the development of certification training standards.

This certification training standard applies to:

1. A person who meets the definition of employer, supervisor and workers under section 2 of the OHS Act of Newfoundland and Labrador.
  - a) An employer who employs a person in an underground place of employment;
  - b) A supervisor who advises workers in an underground place of employment; and
  - c) Workers who follow instructions and training for work in an underground place of employment; or
2. A person who is delivering a Mine Rescue Certification Training Program.

## 1. Approval of Mine Rescue Certification Training Providers

Training providers must apply and be approved by WorkplaceNL to deliver mine rescue certification training.

The Workplace Health, Safety and Compensation Act, 2022 requires all employers performing work (directly or through a contract) in Newfoundland and Labrador to register with WorkplaceNL. All certified training providers who employ workers or contract work must be in compliance with the registration, reporting and payment requirements of WorkplaceNL. Training providers will be checked for compliance with these requirements and those who do not comply will be denied certification as a training provider.

WorkplaceNL may approve mine rescue certification training providers if they satisfy the following criteria:

1. The underground place of employment site, or a third party authorized in writing by the underground mine site, has an in-depth knowledge of the site's underground operations;
2. The provider is registered as an industrial fire department with the Department of Justice and Public Safety, Fire and Emergency Services Division;
3. Competent mine rescue certification trainer(s);
4. Delivery of mine rescue certification training that meets WorkplaceNL's Mine Rescue Certification Training Standard;
5. Documentation, record keeping and adherence to administrative requirements of WorkplaceNL; and
6. Maintains program integrity and delivery.

In order for mine rescue certification training providers to maintain approval, they must ensure that their trainers deliver a minimum of one Mine Rescue Certification Training Program, or three, eight-hour mine rescue refresher training courses in each calendar year. WorkplaceNL's Policy HS-03, Occupational Health and Safety Certification Training, provides additional information to training providers regarding approval processes, program delivery, administration and monitoring, and maintenance of approval status.

## 2. Approval of Mine Rescue Certification Trainers

Mine rescue certification trainers must be affiliated with an underground place of employment in the province of Newfoundland and Labrador (e.g. training provider). Applicants who wish to be certified as a mine rescue certification trainer may forward an application to WorkplaceNL demonstrating the appropriate education, training and experience.

To be approved to instruct mine rescue training the trainer must:

- a) Meet the minimum criteria;
- b) Complete a curriculum review course as prescribed by WorkplaceNL;
- c) Have an advanced certificate in mine rescue;
- d) Pass a trainer assessment as prescribed by WorkplaceNL; and
- e) Sign a Certification Training Code of Ethics.

The following is the minimum criteria to be considered for mine rescue certification trainers:

- a) High school diploma or equivalency;
- b) OHS education, experience and training:
  - i. Safety designation;
  - ii. Post-secondary OHS certificate or diploma; or
  - iii. Five years demonstrated safety knowledge and competency.
- c) Adult education experience:
  - i. Proof of certification in adult education and training principles; or
  - ii. Two consecutive years instructing adult learners with a minimum of three courses instructed each year.
- d) Current certification as an advanced mine rescuer and at least one year of experience;
- e) “Competent” and “qualified” as defined by the OHS Regulations in the applicable standard; and
- f) Proficient knowledge of OHS Regulations and any related Standards adopted by the province.

Candidates who have completed the Introduction to Mine Rescue Course must obtain approval in writing from WorkplaceNL before they are authorized to instruct a mine rescue training course or refresher training.

To maintain certification as a mine rescue trainer, each trainer must deliver a minimum of one Introduction to Mine Rescue certification training course or three, eight-hour mine rescue refresher training courses each calendar year.

WorkplaceNL may suspend or decertify a mine rescue trainer, at any time, in circumstances where it becomes satisfied that:

- a) The trainer failed to deliver training that meets WorkplaceNL's certification training standard;
- b) The trainer failed to complete the minimum number of training offerings in a calendar year required to maintain their trainer status;
- c) The trainer has failed a quality control audit; or
- d) The trainer has breached the Certification Training Code of Ethics.

WorkplaceNL Policy HS-03, Occupational Health and Safety Certification Training provides additional information to trainers regarding approval processes, program delivery, administration and monitoring, and maintenance of approval status.

## **2.1. Delivery of training that meets the Mine Rescue Certification Training Standard**

Training providers who offer WorkplaceNL's Mine Rescue Certification Training Program must ensure that its trainers deliver training programs according to WorkplaceNL's Mine Rescue Certification Training Standard, and use the training materials and delivery methods prescribed by WorkplaceNL.

Any changes made to a Mine Rescue Certification Training Program must be submitted and approved by WorkplaceNL.

## **2.2. Adult Learning Principles**

Program design, content and activities must demonstrate adult learning principles, and include theory and practical components.

## **2.3. Comprehension Level**

Mine rescue certification training must be designed for a general audience and have a comprehension level at or below a grade eight level with the exception of necessary technical terms. Plain language should be used and accommodation made for the varying literacy levels of participants.

## **2.4. Evaluation Methods**

Trainers must conduct ongoing evaluation throughout the training to ensure participant learning outcomes are achieved. Participants must complete knowledge checks at various points to confirm their knowledge and understanding of the material covered.

## **2.5. Evaluation and Feedback**

Trainers are required to provide and collect training evaluation forms for all participants. These forms must be retained by the trainer or training provider for five years. WorkplaceNL may request copies of participant evaluation forms as part of a quality assurance audit of training providers and trainers.

Introduction to Mine Rescue course evaluations must include a:

- a) Written test;
- b) Practical evaluation that includes:
  - i. Executing emergency procedures;
  - ii. Performing arduous work;
  - iii. Providing first aid;
  - iv. Servicing, maintenance, use, and care of equipment;
  - v. Travelling underground; and
  - vi. Travelling in smoke or a simulated environment.

### 3. Mine Manager

Where an underground place of employment requires mine rescue a person must be designated by the mine site to serve as the mine manager. This person is typically the individual in charge of the mine, and is often filled by the President, Chief Executive Officer (CEO) or Chairman of the Board of the company.

The mine manager is responsible for ensuring the mine site meets the minimum legislative requirements as determined by site hazards. They are responsible for the success or failure of a mine rescue operation.

The mine manager must:

- a) Register the mine site as an industrial fire department with the Department of Justice and Public Safety, Fire and Emergency Services Division;
- b) Provide a qualified mine rescue trainer that is certified by WorkplaceNL to instruct the Introduction to Mine Rescue Training Course;
- c) Ensure the delivery of mine rescue certification training meets WorkplaceNL's Mine Rescue Certification Training Standard;
- d) Maintain mine rescue training records for all team members for as long as they are employed as a member of the mine rescue team;
- e) Maintain a training matrix to document refresher training for the mine rescue team, including topics and hours of instruction;
- f) Conduct quality assurance audits of mine rescue training programs to ensure they adhere to WorkplaceNL's Mine Rescue Certification Training Standard;
- g) Ensure at least three fully-outfitted and trained, five-person mine rescue teams, totaling 15 people, are in place for each mine site. Equipment must also be readily available for one additional mine rescue person;
- h) Ensure at least 10 fully-outfitted and trained mine rescue personnel are stationed on the surface or in close proximity to the mine entrance at all times when workers are working underground;
- i) Provide WorkplaceNL with a list of active mine rescue team members in a format prescribed by WorkplaceNL;
- j) Ensure mutual aid agreements are made with nearby mining operations to provide mine rescue assistance. This must include ensuring that personnel are available to receive arriving teams from other mining operations, if required, and that OHS Division personnel in the Department of Digital Government and Service NL, are notified of the arrangements;
- k) Establish a control group to make decisions during a mine rescue operation; and
- l) Provide a competent health care professional to examine the mine rescue teams, in the event of an emergency operation.

To serve as the mine manager, the individual must complete a Mine Rescue Management Certification Training Program.

## 4. Control Group

The control group is responsible for decisions made during the mine rescue operation. The control group must be intricately aware of how a mine rescue operations work, have high levels of knowledge of what is happening onsite and the hazards associated with the operations underground.

The control group must be able to obtain supplies and provide proper and effective communications. It is recommended that at least some members of the control group have mine rescue team member experience as this will help to make more informed decisions on the operation.

It is also recommended that the control group consist of members from the following areas:

- Technical services (planning, ventilation and ground control)
- Mine production (senior supervisors)
- Site control and communications (security, safety, systems, and communications)

These individuals have specific knowledge of the workings of the mine that may be critical during an emergency, including current operations, maintenance and mine processes, and procedures for dealing with the issues. Making them apart of the control group will help to ensure the right decisions are made during a mine rescue operation.

The briefing officer will be the point of contact to deliver messages between the control group and mine rescue team. The control group should always consider information and suggestions offered by the briefing officer and mine rescue teams.

Control group members must have training regularly to better understand their role, responsibilities and the complications that could arise during a mine rescue operation.

## 5. Briefing Officers

The briefing officer is the main communication point between the control group and mine rescue team.

At the beginning of an emergency underground, the briefing officer meets with the control group to determine the mine rescue team's operation or tasks. They then communicate the decisions made by the control group to the captains of the mine rescue teams.

The briefing officer must be someone with significant mine rescue experience that has an in-depth knowledge of mine rescue and the underground site. The briefing officer will give advice and guidance to the control group based on their knowledge of mine rescue, and the safe operation of mine rescue teams.

Briefing officers must:

- a) Meet with the control group and collect the information necessary to brief the mine rescue team captain(s);
- b) Brief the team captain(s) and provide written instructions on the decisions made by the control group about the mine rescue team's operation or tasks prior to the team's departure;
- c) Set time limits and synchronize watches with the team captain(s) prior to departure;
- d) Maintain communications between the captain(s) and the control group during a mine rescue operation;
- e) Communicate with family members, public and news media;
- f) Maintain awareness of ongoing underground activities;
- g) Obtain needed tools and equipment; and
- h) Ensure safety of mine rescue teams.

Briefings with the mine rescue teams must be conducted in a quiet area away from distractions, and must include:

- a) The nature of the emergency;
- b) The current information available;
- c) Actions taken so far;
- d) Any missing persons, including their last known whereabouts;
- e) The location of:
  - i. The fresh air base
  - ii. Refuge stations
  - iii. Potential rest and cooling areas
  - iv. Potential areas of heat exposure
  - v. Standby teams
- f) Installations such as air, water and electricity;
- g) Route of travel and conditions, including real or potential heat exposures and areas of poor visibility;
- h) Communication methods;
- i) Mine rescue equipment available, including:
  - i. Firefighting equipment and hydrants;
  - ii. First aid equipment and stretchers; and
  - iii. Tools and supplies
- j) Time limits; and
- k) Written instructions.

Mine rescue briefing officers must have a minimum of two-years of experience as a mine rescuer (intermediate or advanced).

Briefing officers must have training regularly to better understand their role and responsibilities during a mine rescue operation. To maintain status, a briefing officer must complete a minimum of one training session each year. During this training session, they must actively participate as a briefing officer.

## 6. Mine Rescue Team Member Selection

The selection of mine rescue team members must be based on the judgement of the Mine Manager and the examining physician. They should consider the following mental, physical and medical requirements.

### 6.1. General Requirements

To qualify as a mine rescuer a candidate must successfully complete mine rescue certification training and refresher training in accordance with this standard, and demonstrate the necessary mental and physical capabilities to perform mine rescue.

The mental and physical demands on a mine rescuer may be extreme and last for extended periods of time. Above average strength, endurance, and mental acuity are required.

A member of a mine rescue team should:

- a) Be in good physical and mental health;
- b) Be clean-shaven in accordance with CAN/CSA Z94.4, Selection, use, and care of respirators;
- c) Have a calm and self-controlled attitude in emergency situations;
- d) Have good judgement and initiative;
- e) Be capable of performing long and arduous physical labour;
- f) Be familiar with underground mining conditions and practices; and
- g) Be able to communicate in the language used at the mine site.

### 6.2. Medical Requirements

Mine rescue personnel must be examined by a physician and certified as fit for mine rescue training before they complete a mine rescue certification training course. To maintain their active status, they must be examined annually thereafter. This medical examination must meet the requirements of OHS Regs., s.42, 43 and 47 and CAN/CSA Standard Z94.4, Selection, use, and care of respirators.

The physician must retain the original copy of the mine rescue team members baseline and annual medical report(s). The employer must retain a copy of the section of the annual medical report signed by the physician that indicates the candidate is fit for mine rescue. Employer records must be retained for as long as the mine rescuer is employed as a mine rescuer.



## 7. Mine Rescue Team Training Requirements

To qualify as a mine rescue team member, a candidate must successfully complete the Introduction to Mine Rescue Training Course delivered by a WorkplaceNL-approved trainer and the associated prerequisite courses.

Mine rescue training consists of three levels of certification that are based on the training and experience of the member. They are:

1. Basic
2. Intermediate
3. Advanced

### 7.1. Mine Rescue - Basic

Mine rescue members with basic-level certification are qualified to serve as the No. 2, 3 or 4 mine rescuer on a mine rescue team. They are not permitted to serve as the No.1 (Captain) or No. 5 (Vice-captain) mine rescuer.

To achieve basic-level certification, the mine rescue member must complete the Introduction to Mine Rescue Training Course and hold current certification in:

- a) First Aid for First Responders provided by a WorkplaceNL-approved Workplace First Aid Provider (minimum of 35 hours duration);
- b) Fall Protection;
- c) Introduction to Mine Rescue; and
- d) Power Line Hazards.

To maintain basic-level status the mine rescuer must complete a minimum of six, eight-hour refresher training sessions per year.

### 7.2. Mine Rescue - Intermediate

Mine rescue members with intermediate-level certification are qualified to serve as any member of a mine rescue team, including the No.1 (Captain) or No. 5 (Vice-captain).

To achieve intermediate-level certification, the mine rescue member must have valid certification in the training courses required for a basic-level mine rescuer, one-year of experience as a basic-level mine rescuer and have current certification in:

- a) Hazardous Materials Awareness (NFPA 1072);
- b) Industrial Firefighting (NFPA);
- c) Rope Rescue provided by an NFPA-approved trainer (minimum of 40 hours in duration) that includes the following learning objectives:
  - What is rope rescue
  - Need for rope rescue in mine rescue
  - PPE requirements
  - Rope and webbing types and design
  - Rope attributes, including breaking strength, working loads, and safety factors
  - Rope care
  - Rope rescue equipment inspection and storage
  - Hardware

- Descent control devices
  - Rigging plates
  - Edge protection
  - Types of edge protection
  - Stretchers
  - Knots, bends and hitches
  - Harnesses
  - Subject securement
  - Stretcher rigging
  - Anchors
  - Mechanical advantage
  - Practical rescue based on potential site scenarios, using a training dummy
  - Communication
- d) Vehicle Search and Rescue (vehicle extrication) provided by an NFPA-approved trainer (minimum of 24 hours in duration) that includes the following learning objectives:
- What is vehicle search and rescue (vehicle extrication)?
  - Need for vehicle extrication and search and rescue
  - Hazard of vehicle extrication and rope rescue
  - PPE requirements
  - Vehicle Search and Rescue equipment (spreader, cutter, ram, airbags, cribbing)
  - Extrication techniques
  - Equipment inspection
  - Equipment maintenance and care
  - Scene assessment
  - Communication
  - Practice equipment use

To maintain their intermediate-level status the mine rescuer must complete a minimum of six, eight-hour refresher training sessions per year.

### **7.3. Mine Rescue - Advanced**

Mine rescue members with advanced-level certification are qualified to serve as any member of a mine rescue team, including the No.1 (Captain) or No. 5 (Vice-captain).

To achieve advanced-level certification, the mine rescue member must have valid certification in the training courses required for a basic-level and intermediate-level mine rescuer, have one-year of experience as an intermediate-level mine rescuer and have current certification in:

- a) Drager BG4 Technician training;
- b) Hazardous Materials Operations (NFPA 1072);
- c) Mine Rescue Management;
- d) Rope Rescue Awareness, Operations and Technician (NFPA 1006); and
- e) Vehicle Search and Rescue (NFPA 1006).

To maintain their advanced-level status the mine rescuer must complete a minimum of six, eight-hour refresher training sessions per year.

## 8. Introduction to Mine Rescue Training

### 8.1. Learning outcomes

The following topics must be covered in the Introduction to Mine Rescue Training Course:

- a) Introduction
- b) Underground hazards
- c) Atmospheric hazards
- d) Atmospheric monitoring
- e) Roles and responsibilities
- f) Standard mine rescue equipment
- g) CAREvent DRA automatic rescue ventilator
- h) Mine rescue facilities
- i) Mine rescue procedures
- j) Properties of fire
- k) Firefighting

The Introduction to Mine Rescue Training Course must consist of a minimum of three days, or 24 hours, of instruction completed in both the classroom and the underground environment. Training should be completed on consecutive days.

Class size must not exceed 10 participants. To qualify for certification, participants must demonstrate a satisfactory degree of knowledge, skill, competency, and proficiency in the use of mine rescue equipment and procedures.

## 8.2. Prerequisites

To qualify as a mine rescue team member, a candidate must successfully complete the Introduction to Mine Rescue Training Course delivered by a WorkplaceNL-approved trainer. Prior to completing this course, candidates must have current certification in:

- a) Drager BG4 User training, completed no more than 60 days before beginning the Introduction to Mine Rescue Training Course;
- b) Gas detection training which includes practical use of the gas detection equipment that is used at the mine site; and
- c) Workplace hazardous materials information system (WHMIS) training.

## 8.3. Recertification

The Introduction to Mine Rescue training course will be valid for as long as a mine rescue team member meets the refresher training requirements. If a mine rescue team member fails to meet the refresher requirements, they will be required to complete the Introduction to Mine Rescue Training Course again.

## 8.4. Refresher Training

Refresher training is necessary to maintain the competency of mine rescue team members. Each year, all mine rescue team members must receive at minimum six, eight-hour mine rescue refresher training sessions, in order to maintain their status. Of the six sessions, at least four must include wearing and using a BG4.

For courses that are over eight-hours in duration, the course will only be counted as one of the six refreshers. For example, a two-day course will account for one refresher course.

Refresher training must include basic, intermediate and advanced mine rescue techniques and topics. Over a 36-month period, each mine rescue team member must complete each of the topics below, at a minimum:

- a) BG4 troubleshooting;
- b) Electrical safety;
- c) Firefighting training that includes live fire and smoke;
- d) Firefighting training that includes building barricades;
- e) Firefighting training that includes connecting to underground water supplies;
- f) Firefighting training that includes use of foam extinguishing agent;
- g) Firefighting training that includes use of fire extinguishers;
- h) First aid for femur break or crush (traction);
- i) First aid for exposure to toxic chemical;
- j) Oxygen administration;
- k) Response to rockfall (entrapment);
- l) Rope rescue training that includes performing rescue in escape ways and any area other area underground where it may be required;
- m) Routes of travel and turnaround points;
- n) Procedures for communication and travel underground;
- o) Search in zero visibility;

- p) Spinal immobilization;
- q) Vehicle extrication using airbags and cribbing; and
- r) Vehicle extrication using ram, spreader and cutter.

Practical sessions must resemble actual emergency situations as closely as possible, with the mine rescue trainer acting as the Briefing Officer or on-site official-in-charge. Where possible, practical sessions should be conducted in an underground environment and apply competency-based mine rescue practices and procedures.

## 9. Documentation, record keeping and adherence to administrative requirements of WorkplaceNL

Mine rescue training providers must maintain records of mine rescue trainers and trainees by:

- a) Collecting and maintaining participant training records;
- b) Submitting training records as prescribed by WorkplaceNL's Certification Training Registry;
- c) Collecting and maintaining records of competent and qualified trainers including their names and contact information, education level, training experience, knowledge of mine rescue equipment, systems and planning and background in OHS education and training;
- d) Developing and implementing internal auditing systems to ensure trainers are following the Introduction to Mine Rescue Certification Training Standard;
- e) Providing WorkplaceNL with participant evaluations upon request for data analysis and quality assurance purposes;
- f) Submitting any information regarding the mine rescue certification training program to WorkplaceNL as a means of measuring the effectiveness of WorkplaceNL in meeting its objectives; and
- g) Following WorkplaceNL's administrative process for the delivery of certification training.

If a training provider elects to issue a certificate of attendance to participants, the document must clearly indicate the type of certification training, the name of the training provider and trainer, the participant's name, date of successful completion, and date of expiry. The official record of certification will be housed in WorkplaceNL's Certification Training Registry.

## 10. Monitoring of Program Integrity and Delivery

To ensure the integrity of the Mine Rescue Certification Training Program, all training providers and trainers must strictly adhere to the content of the Mine Rescue Certification Training Standard and associated training programs being delivered.

To ensure that certification training standards are met and maintained, WorkplaceNL may:

- a) Conduct random quality assurance audits;
- b) Investigate all allegations of non-compliance;
- c) Review participant evaluation forms;
- d) Receive and respond to concerns; and
- e) Review administrative processes used by traffic control training providers and trainers.

WorkplaceNL's Policy HS-03, Occupational Health and Safety Certification Training states that the status of a certified training provider or trainer may be revoked or suspended if WorkplaceNL has reason to believe the above certification training standard is not being met.

## 11. Transition Period

To provide ample time for underground places of employment to adapt and comply with this updated Certification Training Standard, a two-year transition period has been established (ending April 30, 2026). During this transition period underground places of employment must implement the necessary training for mine rescue teams and ensure full compliance with the updated standard.