

Workplace Health and Safety Bulletin



A Code of Practice for Firefighters

Application of Alberta's Occupational Health and Safety Code 2006 to
Emergency Operations of the Fire Service in Alberta

Prepared jointly by:
Alberta Municipal Affairs and Housing
Alberta Fire Commissioner's Office
and
Employment, Immigration and Industry
Workplace Health and Safety



Purpose

This Code of Practice provides explanations of Alberta’s *Occupational Health and Safety (OHS) Act*, (O-2 RSA 2000), Occupational Health and Safety (OHS) Regulation, (AR 62/2003) and the Occupational Health and Safety (OHS) Code 2006 as they apply to the emergency operations of fire departments in Alberta. This Code of Practice is intended to deal primarily with the special work sites commonly known by the emergency services industry as an “emergency incident” and to situations where workers involved in delivering emergency services are responding at these sites.

This Code of Practice describes the minimum standards to which a fire service must comply with the above mentioned health and safety legislation and looks specifically at those sections of the legislation where clarification and explanation in their application to the fire service and emergency operations has been requested. Where there is no explanation provided, the reader is referred back to the applicable section(s) of the *OHS Act*, Regulation or Code.

The main goals of the legislation are to prevent injury and fatality incidents and to reduce the severity of those incidents that do occur among Alberta’s workers, including firefighters.

Any reference to “worker” in the legislation or in this Code of Practice is meant to be interpreted in its broadest sense and includes all persons working for an employer and includes firefighters, officers, chief officers, supervisors, managers, directors, etc., regardless of their employment status. Firefighters employed as volunteers, part time, full time or any combination of these are considered to be workers by the *OHS Act*.

Originally published in 2003, the OHS Code has been revised and references in this Code of Practice to the OHS Code are to the second edition of the OHS Code, released in 2006. Readers interested in tracking the changes made between the two editions are referred to the following Safety Bulletin published by Workplace Health and Safety:



http://employment.alberta.ca/documents/WHS/WHS-PUB_li026.pdf

OHS Code – Comparison of Requirements Between the OHS Code 2003 and OHS Code 2006 – LI026

Copies of the *OHS Act*, Regulation and Code are available at the website listed below:

 <http://employment.alberta.ca/whs-ohs>

This Code of Practice refers to “Part 1”, “Part 2”, and “Part 3” and so on. These references relate directly to the “Parts” or chapters of the OHS Code. Readers are directed to the identically named parts of the OHS Code where the complete legislated requirements can be found.

Explanatory Notes

Part 1: Definitions and General Application

For the purposes of understanding this Code of Practice, the following definitions are provided. Please note that these definitions are not included in the OHS legislation, but are helpful in applying the legislation.

“emergency incident” means the circumstances giving rise to a specific operation;

“emergency operation” means activities relating to rescue, fire suppression, emergency medical care and special operations, and includes the response to the scene of an incident and all functions performed at the scene;

“firefighter” means a worker whose duties include:

- (i) emergency operations, fire inspection and fire investigation, and
- (ii) training for the activities mentioned in subclause (i), and includes a worker whose duties include directing any or all of the activities mentioned in subclauses (i) and (ii);

Note: For the purposes of this document the terms “worker” and “firefighter” are used interchangeably.

Firefighters may be employed as volunteer, part time, full time or any combination of these.

“standard operating procedure” or **“standard operating guideline”** means an operational directive prepared by an employer that establishes a standard course of action for the emergency incidents to which a firefighter is required to respond;

“structural firefighting” means the activities of rescue, fire suppression and property conservation involving buildings, enclosed structures, vehicles, vessels, aircraft or other large objects that are involved in a fire or emergency incident.

Training of firefighters

Training of firefighters is addressed in Part 1 of the OHS Code under the definition of “competent” and in section 15 of the OHS Regulation under “Safety training”.

Three characteristics are used to describe a worker as competent: (see OHS Code Explanation Guide for more detail)

- (1) adequately qualified,
- (2) suitably trained, and
- (3) with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

The required training provided to a firefighter must:

- (a) be provided before the firefighter is allowed to engage in emergency operations, except for on-the-job training assignments conducted under close supervision;
- (b) be provided by competent persons. (A competent person includes a person who has expertise or abilities in subject areas whether or not the person is a member of a fire department);
- (c) address occupational health and safety hazards associated with each of the operational assignments;
- (d) match the duties, functions and role that the firefighter is expected to perform;
- (e) address procedures required to perform operational assignments including sudden changes in conditions;
- (f) address the incident management system and personnel accountability systems used by the fire department;
- (g) address the safe operation of equipment that is required to perform the operational assignments; and

(h) be reviewed periodically in consultation with workers to ensure its adequacy.

Although not specifically required in the OHS Code, records of the training provided to firefighters should be retained and could include, amongst other things:

- names of persons receiving training,
- nature of the training,
- dates when training was provided, and
- name of training officer or training agency.

Please note there are mandatory retention periods for driver training records that can be found in the *Traffic Safety Act* (T-6 RSA 2000) and its Regulation. Please see the Alberta Infrastructure and Transportation website for further information at:

 <http://www.infratrans.gov.ab.ca>

Section 15 of the OHS Regulation requires that a worker be trained in the safe operation of the equipment the worker is required to operate. The training must include the following elements:

- the selection of appropriate equipment;
- the limitations of the equipment;
- an operator's pre-use inspection;
- the use of the equipment;
- the operator skills required by the manufacturer's specifications for the equipment;
- the basic mechanical and maintenance requirements of the equipment;
- loading and unloading the equipment if doing so is a job requirement; and
- the hazards specific to the operation of the equipment at the work site.

In addition, if a worker may be exposed to a harmful substance at a work site, the employer must ensure that the worker is trained in the procedures established by the employer that minimize the worker's exposure to the harmful substance. The worker is required to participate in this training and apply it. The employer must inform the worker of the health hazards associated with exposure to the harmful substance.

Part 2: Hazard Assessment, Elimination and Control

Section 7 of the OHS Code requires an employer to assess a work site for hazards, determine how hazards will be eliminated or controlled, record all of this, communicate the results to workers, and re-evaluate the entire process at regular intervals.

The requirement for a written hazard assessment prior to the start of work is neither possible nor practical during emergency operations at an emergency incident work site. This is reflected in subsection 10(2) of the OHS Code. The requirements to prepare a written report of the hazard assessment and to include on it the date on which it was prepared or revised does not apply to an emergency response during the period that emergency action is required. It is possible however to achieve an acceptable result respecting firefighter safety in advance of an emergency operation.

The following points outline the planning process that must be followed, at a minimum, to ensure safe operations at an emergency incident and compliance with the OHS legislation. These points recognize that a fire department may provide and perform any number or type of emergency services with varying degrees of complexity, based on the resources of the municipality/owner and the technical expertise available to that fire department. Taken together, they constitute a plan that encompasses the requirements of Part 2 of the OHS Code.

- (1) Each employer must determine exactly what emergency service(s) the fire department will be authorized to provide and identify the level or standard to which each service will be performed. This includes response to structural fires, wildland fires, and various rescue situations including technical rescue, dangerous goods and chemical, biological, radiological and nuclear (CBRN) incidents among others.
- (2) Once these decisions have been made, this service level determination is usually committed to writing in the form of a bylaw, policy or guideline. The employer must then clearly communicate to firefighters what is expected from them as workers when responses are made. The means of communicating and maintaining this information is through the collection of guidelines, (commonly referred to as standard operating

procedures, or guidelines [SOPs or SOGs]) and policies which describe the authorized activities of the fire service and how the activities are to be performed as required by (1) above. These documents form the basis of the written plan.

- (3) The guidelines and policies required in (2) must include:
- (a) identification of the standard firefighting functions or evolutions expected of firefighters based on the emergency services to be offered, including functions or evolutions that must be performed simultaneously;
 - (b) the minimum number of firefighters required to safely perform each identified firefighting function or evolution;
 - (c) the specific worker safety rules, procedures and first aid and medical attention services for firefighters to be followed at each type of emergency incident;
 - (d) the number and types of firefighting vehicles, equipment and firefighters required for the initial response to each type of emergency incident to which firefighters might reasonably be expected to respond. This includes policies or procedures to be followed when minimum staffing or equipment levels cannot be met;
 - (e) a guideline or policy on the minimum training a firefighter must be given before being considered competent to perform certain emergency operation functions identified above;
 - (f) a detailed description of the incident management system to be followed at an emergency incident; and
 - (g) a detailed description of the personnel accountability system to be used at each emergency incident.

All firefighters employed at the fire department must receive instruction on how to identify the various hazards a firefighter might encounter and describe, to the extent possible, the actions to be taken that will limit or eliminate exposure to those hazards.

A fire department is not necessarily required to rewrite the guidelines, pre-fire plans, policies or standard operating procedures that it currently has in place. Existing documentation should be reviewed and organized to ensure that it addresses all the topics identified above. All of this must be effectively communicated to firefighters.

Section 9 of the OHS Code requires an employer to either eliminate or control hazards to the lowest level possible. In the fire service, engineering and personal protective equipment (PPE) are effective and

mandatory means for improving firefighter safety but they are not sufficient in and of themselves without the addition of administrative controls. The administrative controls required include an effective incident management system as mentioned in (3)(f) above and an effective personnel accountability system as contemplated in (3)(g). The incident management system must ensure that:

- roles and responsibilities are clearly defined for each firefighter attending the scene of an emergency incident;
- effective communication ensures that firefighters understand their responsibilities during an assigned task;
- effective coordination prevents conflicting activities and ensures that a proper sequence is followed while conducting an assigned task. This becomes increasingly important as more agencies are involved in mitigation activities;
- adequate risk assessment and risk management is performed prior to intervention; and
- proper assignment of sufficient numbers of adequately trained firefighters to conduct an assigned task.

A personnel accountability system must enable the

- identification of firefighters arriving at the scene of an incident,
- identification of firefighters entering and leaving hazardous areas, and
- tracking of firefighters and other support personnel by both location and function.

Both the Incident Management System and Personnel Accountability System may be satisfied by a number of systems that are available and recognized by the fire service. The type and complexity of these systems depends on local conditions and anticipated operations.

Part 3: Specifications and Certifications

Part 3 of the OHS Code applies to all firefighting equipment and requires equipment to be

- (i) inspected according to manufacturer's specifications to ensure firefighter safety while the equipment is being used,
- (ii) clearly marked with the limitations of the equipment based on current standards,
- (iii) used within known limitations and in a manner that does not endanger the health or safety of a firefighter, and
- (iv) maintained according to manufacturer's specifications.

Section 15 of the OHS Regulation requires each worker to be trained in the selection, pre-use inspection, use and limitations of the equipment.

The requirements of Part 3 are not intended to hinder the development of some fire hall inventions where the invention is safe for use. However, the implications of doing so must be understood and caution exercised. A product modified without the consent of the manufacturer, or without having been certified by a professional engineer, may exceed the safe performance limits of the product, void the product warranty, and result in the employer being held liable for any consequences resulting from use of the modified product.

The fabrication of invented devices must be done by persons competent to perform that work. Welding must be done by a competent welder; electrical work by a competent electrician or electronics specialist; final mechanical design by someone competent in assessing loads, forces, etc.; non-destructive testing (NDT) by someone competent in NDT testing and evaluation, etc. Even a seemingly simple invented device, when coupled to a system that controls or influences the release of energy e.g. water under pressure or hydraulic or pneumatic systems, or “improves” the way that a breathing-air system operates for example, can result in harm to workers and others.

Consider the implications of device failure or misuse before putting the device into service. If there is any question as to the safety of the device, have it assessed and certified by a professional engineer.

Where existing equipment that is currently certified by a certification and testing body, manufacturer or engineer is modified, the certification will require review and renewal. The employer must either get the manufacturer to approve the new use or have a professional engineer certify the device as safe for use.

All fire department pumping apparatus, water tanks, ladder trucks, aerial devices, mini-pumpers, special services firefighting vehicles and combinations of these should be designed and constructed in accordance with a commonly accepted Alberta or industry standard. For example, compliance with CAN/ULC-S515-04, *Automobile Fire Fighting Apparatus* and with the manufacturer’s recommended specifications is considered to be an acceptable design standard. CAN/ULC-S515-04 is not a legislated standard but it is the commonly relied upon and accepted standard for specifying automotive

firefighting apparatus in Alberta. Ongoing maintenance and operation of vehicles is subject to the provisions of the *Traffic Safety Act* (T-6 RSA 2000) and its Regulations.

Part 4: Hazardous Substances

Part 4 of the OHS Code applies to firefighting as it is written and includes exposures that might occur during any emergency operation and not just those exposures possible during designated hazardous materials or dangerous goods responses. Schedule 1, Table 2 of the OHS Code lists all the chemical substances for which the legislation sets occupational exposure limits. The employer must ensure that a firefighter's exposure to any substance listed in the table is kept as low as reasonably practicable and does not exceed the substance's occupational exposure limit. A worker may not be exposed to a substance listed in Table 2 at a concentration exceeding its ceiling limit at any time. Worker exposure is not likely an issue in an encapsulated suit.

Employers whose firefighters may be exposed to harmful substances must complete a hazard assessment as explained in Part 2: Hazard Assessment, Elimination and Control in this Code of Practice. Key requirements include identification of potential exposures, development of protective procedures, and training of firefighters in those procedures. It is not necessary to develop a written SOG/SOP regarding every possible chemical a firefighter might be exposed to in service. What is expected is that procedures will be developed and personal protective equipment will be supplied and mandated that will protect the health and safety of firefighters when they respond at the stated service level. The policy or procedure must also cover:

- the training and awareness levels to be received by each firefighter;
- the means by which firefighters can obtain the information on an exposure to any known substance and the decontamination requirements;
- limitations of his or her PPE;
- what the department does in the event of a response to an incident where there may be an exposure to that substance; and
- the location of Material Safety Data Sheets (MSDSs) and similar resources.

Decontamination capabilities or facilities must be provided or arranged, based on the potential exposures that firefighters might reasonably expect based on a department's stated service level. This includes the ability to decontaminate their person, clothing, equipment and apparatus. No firefighter should be permitted to leave any work site or the firehall where there is a possibility that he or she may be carrying harmful substances on their person or clothing.

The OHS Code requires employers to document worker exposures to specific harmful substances in limited circumstances (asbestos, silica and coal dust) and the steps taken to mitigate the exposure and any ongoing monitoring. In all other cases, reporting, record keeping and ongoing monitoring must, at a minimum, be in compliance with Workers' Compensation Board policies. See sections 32 and 33 of the *Workers' Compensation Act* (W-15 RSA 2000).

Part 5: Confined Spaces

A confined space definition is provided in Part 1 of the OHS Code and is expanded upon in the OHS Code Explanation Guide. A confined space includes tanks and other structures not intended for human occupancy. It does not generally apply to houses and other normally inhabited structures.

If a fire department is providing emergency rescue services involving a confined space entry, it must comply with the requirements of this Part. Testing the atmosphere of a burning structure for toxic, flammable or explosive substances may be impractical. Continuous air monitoring is required if the atmosphere within the confined space can change unpredictably while the worker is inside the confined space. Testing and continuous air monitoring are made unnecessary if complete respiratory protective equipment and other personal protective equipment appropriate to the conditions within the confined space are used.

If a confined space entry is being made in other than a burning structure, and the site hazard assessment identifies a potential hazard, then pre-entry atmospheric testing must be done using a calibrated test instrument.

A written code of practice (SOP/SOG) must be developed and training in its requirements and procedures must be provided to any firefighter assigned to these duties.

The records requirements of section 58 of the OHS Code concerning entries is satisfied by retaining the incident command sheets and run reports for the stated timeframe.

Accountability systems as described in 3(g) of Part 2 of this Code of Practice are required for emergency confined space entry rescue. These accountability systems must provide a comparable or superior level of worker safety to the permitting systems described in subsection 47(1) of the OHS Code.

An effective rescue plan that gets firefighters out of the confined space without causing further injury to the injured worker and without placing firefighters in undue peril must be developed with training provided to all affected firefighters.

Part 6: Cranes, Hoisting and Lifting Devices

If a fire department is using cranes, hoists, winches or similar pieces of equipment with rated load capacities of 2,000 kilograms or more, this Part applies as written. Most fire departments do not operate this type of equipment.

This Part requires an employer to ensure that the proper lifting device is selected and used for the task, that it be labelled with its rated load capacity, that only trained workers operate the lifting device and that a log be maintained that records inspection, use and maintenance activities for the lifting device.

Part 7: Emergency Preparedness and Response

This Part applies as written. A fire department may have already addressed this Part through the planning required under Part 2 Hazard Assessment, Elimination and Control.

Part 7 of the OHS Code should be viewed as an opportunity for fire departments to plan for how firefighters and other workers at an incident will be looked after if a firefighter or other worker is injured, not how the emergency operation will be mitigated or how victims of

the emergency incident will be cared for. Every fire department should develop an SOP/SOG covering the points listed in section 116 of the OHS Code.

Part 8: Entrances, Walkways, Stairways and Ladders

With the exception of having to ensure the presence of primary and secondary escape routes, and specific requirements applicable to portable ladders, this Part does not apply to fire department emergency operations. Note: See Fall Protection below.

The requirement that the employer ensure that there is a secondary escape route that is readily useable at all times if a worker could be isolated from a primary escape route [subsection 119(4)] is impracticable in almost all emergency situations. The accepted practice in firefighting is to preserve the point of entry as required by subsection 119(1). The employer needs to perform an effective hazard assessment, determining if entry is reasonable and necessary. Further, the employer needs to ensure that all necessary and reasonable steps are being taken to ensure the safety of firefighters entering the structure.

Manufactured portable ladders must meet the requirements of the listed CSA or ANSI standards. If a firefighter is working from a portable ladder and is not using any means of fall protection, the firefighter must maintain three-point contact whenever he or she extends an arm beyond a side rail. While “three-point” ideally means two feet and one hand, it is recognized that this is not always possible. A leg lock on the ladder is considered an acceptable means of maintaining three-point contact and therefore stability on the ladder.

This Part applies to firehalls.

Part 9: Fall Protection

The “rescue personnel exemption” presented in Part 9 of the OHS Code does not exempt firefighters from using fall protection equipment and practices. It does exempt firefighters from using the equipment and practices specified in Part 9, allowing the use of alternative equipment and practices. Whereas Part 9 specifies the use of “industrial”-type fall protection equipment and practices, the exemption allows firefighters to use alternate equipment and practices.

The practices used must provide an effective measure of worker safety and address the unique hazards that a rescue or firefighting work site presents. The practices must also be documented in the department's SOPs/SOGs. A fall protection plan, as required by section 143 of the OHS Code, must be prepared.

Part 10: Fire and Explosion Hazards

This Part applies to the fire service in all activities, including training. Part 10 was never intended to apply to burning buildings or exploding structures. The requirement that a professional engineer classify hazardous locations [section 162 (1)] and that various protective procedures and precautions be followed in hazardous locations [section 165] are not intended to apply to emergency situations.

Although subsection 162(1) prohibits a worker from entering an area having an atmosphere that exceeds 20 percent of the lower explosive level of a flammable or explosive substance, subsection 162(2) allows a competent, properly equipped firefighter to enter the area if he or she is responding in an emergency.

Nevertheless, routine entry of a firefighter into an area in which there is a flammable or explosive atmosphere should be discouraged because of the potential for a fire or explosion with life-threatening consequences. An on-site hazard assessment should critically review the need to enter the area against the alternatives of not entering the area, or dispersing/diluting the atmosphere below the lower explosive limit of the flammable or explosive substance present and then entering the area after atmospheric testing with a calibrated test instrument confirms it is safe to do so.

Standard Operating Procedures/Guidelines need to be developed as part of the planning process of how a fire department is going to provide for the safety of firefighters working in emergency operations involving the fire and explosion hazards identified in this Part.

Part 11: First Aid

The rules identified in this Part apply to fire department personnel during normal day-to-day activities and while dealing with the emergency incident. All requirements of this Part apply including all record keeping identified in sections 183 and 184.

Key requirements include:

- Fire departments are required to provide first aid supplies, equipment and staff and must supply them in accordance with Schedule 2, Table 7 of the OHS Code, based on the number of personnel attending.
- Emergency transportation of injured firefighters must be considered and arranged as a part of the department's written SOPs/SOGs. This does not imply that an ambulance is required on site.
- Firefighters must report injuries to the employer at the earliest practicable opportunity.
- Employers must retain records of acute illnesses or injuries, including exposures to harmful substances on any worker as required by section 183 of the OHS Code.

The required first aid providers at an emergency operation may be assigned to perform other duties as long as they remain available and in a fit condition to immediately provide those first aid duties as required by the OHS Code.

Part 12: General Safety Precautions

Only sections 186, 191, 194 and 195 apply to the fire department during emergency operations.

Subsection 186(1) requires lighting at a work site to be sufficient to allow work to be done safely. This means that additional light sources may need to be placed in the work area to allow firefighters to perform their duties.

Section 191 describes the requirements applicable to firefighters acting as designated signallers and to equipment operators being guided by those signallers.

Section 194 requires that firefighters providing traffic control wear highly visible and retroreflective clothing and use a handheld signal light. It also provides guidance for employers on the steps that must be taken to protect firefighters performing their duties on roadways where traffic may be dangerous. Again, documented SOPs/SOGs are required for this type of work assignment.

Section 195 places duties on the employer to ensure that ice is thick enough to support the load placed on it in the event that workers must work on an ice surface. The section only applies if the water beneath the ice is more than 1 metre deep.

Part 13: Joint Work Site Health and Safety Committee

This Part does not directly apply to the fire service.

Part 14: Lifting and Handling Loads

This Part applies to the fire service as written.

The hazard assessment required in section 210 of the OHS Code for manually handling a load that could injure a worker should be considered in the development of SOPs/SOGs and is part of the hazard assessment process considered in Part 2.

Part 15: Managing the Control of Hazardous Energy (Locking Out)

This Part does not apply to emergency operations. Section 212(1) outlines the areas where locking out is required and includes the servicing, repairing, testing or adjusting of machinery, equipment or powered mobile equipment. As fire departments do not do any of these activities during emergency operations, this section does not apply. Nevertheless, an emergency response service should always ensure that electrical energy has been isolated prior to applying a wetting agent to a fire.

A fire department should develop SOPs/SOGs outlining safe work procedures when dealing with rescue, extrication or other emergency activities around equipment presenting potential hazards to workers.

Although unlikely to ever be used by a fire service during normal operations, this Part includes a locking-out option – complex group control – that deals with extra-ordinary situations that simultaneously involve many workers and many lock out points. This approach recognizes the use of administrative procedures that allow an employer to move away from the “one worker, one lock, one key” principle of locking out.

Part 16: Noise Exposure

This Part applies as written to firefighters.

Employers must take all reasonable measures to reduce noise levels to which firefighters are exposed. Noise reduction strategies may include engineering controls, considering noise levels in equipment and apparatus at the time of purchase and retrofitting current equipment/apparatus with noise suppression technology. An example of where engineering has helped reduce noise exposure is the relocation of sirens from the roof of apparatus to the front bumper, thereby reducing noise levels in the passenger compartment.

Where noise reduction is not reasonably possible, the employer must provide hearing protection and training on its use. Tables located in Schedule 3 of the OHS Code provide information on levels of permissible exposure and appropriate hearing protection that must be used.

A workplace noise exposure assessment must be undertaken to determine what noise level firefighters might be exposed to during routine emergency operations. If the results of the assessment indicate that noise levels exceed the exposure limits of Schedule 3, Table 1, a noise management program as required by section 221 must be developed and implemented.

If it is identified that firefighters are being exposed to excessive noise, audiometric monitoring must be provided at the employer's expense. Section 223 provides detailed instructions on what that testing entails.

Part 17: Overhead Power Lines

The safe limits of approach to energized overhead power lines identified in section 225 are applicable to the fire service. All power lines are to be considered energized – “live” – until confirmed by the local utility as safe to approach.

SOPs/SOGs and training including preplanning with utility providers is essential to safe emergency operations around energized overhead utility lines.

Part 18: Personal Protective Equipment

Based on the hazard assessment performed under Part 2, the employer must ensure that such personal protective equipment (PPE) as is required to protect the firefighter from the hazards of the job is used. The hazard assessment may indicate the need for

- barrier devices to protect against exposure to blood and bodily fluids,
- eye/face protection during vehicle extraction,
- balaclava under headwear as protection against heat exposure and fire,
- skin protection against contact with chemicals, and
- protection against contact with an operating chainsaw, etc.

The only firefighting standards identified in this Part are

- section 233 requiring firefighter footwear to comply with the listed NFPA or CSA Standards, and
- section 237 allowing an employer to consider head protection complying with NFPA 1971 or 1977 where the hazards a firefighter might be exposed to require special protection, such as in structural or wildland firefighting.

In all other cases the employer must be able to demonstrate that acceptable protection levels for the hazards faced by firefighters based on a hazard assessment of the department's operations have been provided. The use of clothing and equipment that complies with the standards issued by CSA, ANSI, NFPA, CGSB and other recognized agencies should be identified in departmental purchasing policies and procedures.

Care must be taken not to assume that equipment certified or intended to protect against one hazard can effectively protect against another. For instance, bunker gear provides effective protection against the hazards of structural firefighting conditions but actually adds to the hazard level a firefighter faces when dealing with a water rescue. PPE must be provided based on the hazard assessment done in compliance with the requirements of Part 2.

Section 245 of the OHS Code identifies the need to develop and implement a code of practice governing the selection, maintenance and use of respiratory protective equipment. Section 247 provides direction on what must be considered when providing respiratory protection. Self-contained breathing apparatus (SCBA) may not be the only

respiratory protective gear required by a fire department. The manufacturer's maintenance schedule should be referenced as part of the required code of practice.

Employers must ensure that air used in SCBA and airline equipment meets the requirements of CSA Standard Z180.1-00, *Compressed Breathing Air and Systems*. Regular testing by competent persons is essential.

Sections 244 and 250 require that employers ensure firefighters who must use respiratory protective equipment that depends on an effective face seal are provided with equipment that fits them properly. Fit testing must be provided to all firefighters and equipment must be made available in the correct sizing. It also requires that any person requiring this type of respiratory protective equipment be clean-shaven where the face piece seals to the skin of the face.

Firefighters are required to use the provided PPE as described in subsection 228(2). This includes any person exposed to the hazards of the workplace, including incident commanders and other officers.

Part 19: Powered Mobile Equipment

This Part applies to the safe operation, fueling and maintenance of all fire department vehicles, including apparatus, cars, trucks and off-road vehicles such as snowmobiles and all-terrain vehicles.

Firefighters assigned to operate powered mobile equipment must be competent and authorized by the employer to do so.

Inspections and maintenance, including pre- and post-trip inspections, in accordance with the manufacturer's specifications, are required on all powered mobile equipment. Records must be maintained.

Equipment that must be carried in the passenger compartment must be stored or affixed in such a manner that it cannot become a projectile in case of an accident or emergency stop.

There are special requirements for all terrain vehicles (ATVs), including a prohibition on the use of three-wheeled ATVs.

Subsection 290(1) specifies licensing and mechanical inspection requirements that apply to a worker who uses a personal vehicle for work purposes. In terms of licensing, the employer must ensure that the worker has a valid driver's license appropriate for the type of vehicle being operated.

The mechanical inspection requirement – that the worker ensure that his or her personal vehicle is maintained in sound mechanical condition – applies to a personal vehicle used for work purposes. The intent of the requirement is to make sure that the personal vehicle is mechanically sound and safe for work use. This requirement applies to the worker. Evidence of compliance from the perspective of the employer may include the worker having records of maintenance performed on the vehicle.

Examples of work use include:

- (a) transporting equipment on behalf of the fire department or municipality;
- (b) the Fire Chief using a personal vehicle as a “response unit”; and
- (c) transporting bottles of compressed breathing air, fire hose, etc. from the fire station to the fire scene.

An example of non-work use is being paged and then driving the personal vehicle from home to the fire station or fire scene.

Part 20: Radiation Exposure

Part 20 applies to all work sites, including emergency operations.

Part 21: Rigging

Part 21 applies to all work sites, including firefighting and rescue applications.

Ropes, cables and all equipment associated with lifting personnel or materials must be inspected, maintained and used in compliance with this Part.

The use of “home made” or makeshift rigging components that are load bearing is prohibited.

Maximum load ratings of all rigging must be available to workers at the site.

Any SOPs/SOGs adopted by fire departments must follow the manufacturer's specifications for the equipment and follow industry best practices.

Part 22: Safeguards

Where a manufacturer has provided a guard or offers one as an option for the safe operation of a piece of equipment, it must remain in place and be used as intended. See Part 3 of this Code of Practice for implications when changing or altering designs.

Part 23: Scaffolds and Temporary Work Platforms

Those sections of this Part dealing with fire apparatus employing elevated ladders, booms or platforms apply to all fire department activities.

Fire apparatus with elevated ladders, booms and platforms should be designed in accordance with CAN/ULC-S515-04 as the minimum acceptable design standard (see Part 3 of this Code of Practice).

Section 138 of the OHS Code allows firefighters to use alternate means of fall protection during emergency operations and during the training for those operations.

Part 24: Toilets and Washing Facilities

Employers must provide drinking fluids at all work sites in quantities sufficient for the number of workers and the conditions in which they are working. These fluids must include potable water and be made available in a sanitary manner.

Section 356 of the OHS Code requires that an employer make arrangements for access to toilet facilities for workers at temporary work sites, including emergency operations. Pre-planning must consider firefighter rest and recovery (rehabilitation) and personal needs.

Part 25: Tools, Equipment and Machinery

This Part applies to all work sites, including those involving emergency operations.

Part 26: Ventilation Systems

This Part is meant to apply primarily to the firehall and other buildings in a normal mode, not to buildings affected by fire and other emergencies. However, the requirements of this Part do apply in situations such as when a technical rescue team uses portable ventilation systems during a confined space rescue. In such cases the team may be dealing with airborne contaminants, hazardous fumes, gases, or particulates, a flammable atmosphere, or an atmosphere lacking in oxygen. Sections 386 through 388 specify requirements that must be met when ventilation systems are used in such situations.

Part 27: Violence

This section applies to all fire department activities.

When the hazard assessment required in Part 2 is developed, violence in the workplace must be considered. A policy and procedure specific to workplace violence must be developed.

Training must be provided to firefighters on how to recognize workplace violence, what policies and procedures the department has developed and what their role in the process might be.

Part 28: Working Alone

This Part applies to all work sites, including emergency operations. Provision must be made to keep track of all firefighters, including those who might have to be away from the main body of firefighters. It must provide them with the means of contacting assistance should it be required or for the department to check on their status at reasonable intervals.

SOPs/SOGs must be developed to cover each task that might require someone to work alone. Examples of lone worker situations may include incident commanders, inspectors, investigators, and tanker operators.

Part 29: Workplace Hazardous Materials Information System (WHMIS)

All hazardous products used by a fire department must be used, stored and handled in accordance with this Part.

Fire department personnel are required to receive training in WHMIS in accordance with section 397 of the OHS Code.

The WHMIS requirements apply to the products that the fire department uses in its operations, not to hazardous products that it may encounter at an emergency operation.

Part 30: Demolition

If a fire department must fully demolish a structure in the course of its suppression activities, section 419 as it pertains to the disconnection of utilities applies. Critical utility disconnections include natural gas, propane and electricity.

Part 31: Diving Operations

Part 31 applies to all diving operations provided by fire departments.

Fire department diving operations cannot be classified as sport or recreational diving.

Part 32: Excavating and Tunnelling

Although this Part does not normally apply to fire department emergency operations, all due care must be taken, including the development of SOPs/SOGs, training of firefighters and provision of adequate shoring and other necessary materials before committing to respond to emergencies involving excavations and tunnelling.

Any SOPs/SOGs developed must comply with fire industry best practices.

Part 33: Explosives

Many fire departments provide fireworks and pyrotechnic services in their communities. All sections of this Part dealing with fireworks must be complied with, including storage, transportation, handling, qualifications and safe work procedures/practices.

Part 34: Forestry

This Part does not apply to the fire service.

Part 35: Health Care and Industries with Biological Hazards

This Part applies to the fire service in all situations, including emergency operations. It requires an employer to establish policies and procedures regarding biohazardous materials, to provide workers with adequate training and to supply appropriate protection, including sharps containers to minimize the likelihood of firefighter exposures.

Policies and procedures must be developed and implemented to deal with post-exposure management for firefighters who have been exposed to biohazardous materials.

Part 36: Mining

This Part does not apply to the fire service.

Part 37: Oil and Gas Wells

This Part does not apply to the fire service.

Part 38: Residential Roofing

This Part does not apply to the fire service.

Part 39: Tree Care Operations

This Part does not apply to the fire service.

Part 40: Utility Workers – Electrical

This Part does not apply to the fire service.

Part 41: Work Requiring Rope Access

This Part does not apply to the fire service.

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