

March 19, 2009

Attention: All users of the Alberta Fire Code 2006

Re: Replacement Pages for the Alberta Fire Code 2006

The following package of replacement pages for the Alberta Fire Code 2006 are offered to all code users as a result of changes recommended by the High Intensity Residential Fires Working Group.

Changes are indicated by a "★" symbol in the outside margin of the page.

The pages are intended to be printed double-sided. If they are printed single-sided, blank pages can be discarded.

Please remove the existing pages from your copy of the Alberta Fire Code 2006 and replace them with the following replacement pages.

Sincerely,



Ray Cox
Acting Chief Fire Administrator
Alberta Municipal Affairs

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number	Title of Document	Code Reference
CSA	CAN/CSA-C282-05	Emergency Electrical Power Supply for Buildings	6.5.1.1.(1) 6.5.1.4.(1)
CSA	S350-M1980 (R2003)	Code of Practice for Safety in Demolition of Structures	5.6.1.20.(1)
CSA	CAN/CSA-W117.2-01	Safety in Welding, Cutting and Allied Processes	5.2.1.1.(2)
CSA	CAN/CSA-Z32-04	Electrical Safety and Essential Electrical Systems in Health Care Facilities	6.5.1.1.(2)
CSA	Z245.1-02	Steel Pipe	4.5.2.1.(4)
EPA	EPA 510-B-93-004	Doing Inventory Control Right for Underground Storage Tanks	4.4.2.1.(2)
EPA	EPA 510-B-95-009	Introduction to Statistical Inventory Reconciliation: For Underground Storage Tanks	4.4.2.1.(4)
EPA	EPA 530/UST-90/007	Evaluating Leak Detection Methods: Statistical Inventory Reconciliation Methods (SIR)	4.4.2.1.(4)
EUB	Guide 55-2001	Storage Requirements for the Upstream Petroleum Industry	4.1.1.1.(3)
Govt. of Alberta		Corrections Act and its Regulations	5.7.1.5.(1)
Govt. of Alberta		Forests Act and its Regulations	1.4.1.2.(1) ⁽¹⁾
Govt. of Alberta		Forest and Prairie Protection Act and its Regulations	5.7.1.3.(1)
Govt. of Alberta		Hospitals Act and its Regulations	5.7.1.5.(1)
Govt. of Alberta		Mental Health Act and its Regulations	5.7.1.5.(1)
Govt. of Alberta		Nursing Homes Act and its Regulations	5.7.1.5.(1)
Govt. of Alberta		Occupational Health and Safety Act and its Regulations	3.2.7.15.(2) 4.5.5.2.(1)
Govt. of Alberta		Public Lands Act and its Regulations	5.7.1.3.(1)



Table 1.3.1.2. (Continued)

Issuing Agency	Document Number	Title of Document	Code Reference
Govt. of Alberta		Safety Codes Act and its Regulations (also see Alberta Building Code)	1.2.1.1.(1) 1.2.1.1.(1) ⁽²⁾ 1.2.1.1.(4) 1.2.1.1.(5) ⁽²⁾ 1.4.1.1.(1) ⁽¹⁾ 1.4.1.1.(5) ⁽¹⁾ 1.4.1.2.(1) ⁽¹⁾ 2.1.1.1.(2) ⁽²⁾ 2.2.5.1.(1) ⁽²⁾ 2.4.4.5.(3) 2.4.4.6.(1) 2.9.3.1.(1) 3.1.1.4.(2) 3.1.1.4.(3) 3.1.4.1.(1) 3.2.8.2.(3) 4.1.1.1.(3) 4.1.4.1.(1) 4.1.4.1.(2) 4.3.1.3.(1) 4.3.1.3.(2) 4.5.1.1.(2) 4.5.9.5.(2) 4.5.9.6.(1) 4.6.1.1.(2) 5.1.2.1.(1) 5.1.2.2.(1) 5.3.1.2.(2) 5.3.1.2.(3) 5.3.1.10.(2) 5.5.3.4.(1) 5.6.1.10.(1) 5.6.1.12.(1) 7.1.1.4.(6)
Govt. of Alberta		Social Care Facilities Licensing Act and its Regulations	2.10.2.1.(1) 5.7.1.5.(1)
Govt. of Alberta		Uniform Building Standards Act	2.1.1.1.(2) ⁽²⁾
HC	2005	Hazardous Products Act and its Regulations	4.2.3.2.(2)
HC	1985	Pest Control Products Act and its Regulations	4.2.3.2.(2)
HC	2004	Workplace Hazardous Materials Information System (WHMIS) of the Hazardous Products Act	Table 3.2.7.1.
IMO	2002	International Maritime Dangerous Goods Code	3.3.4.8.(1)
NFPA	10-2002	Portable Fire Extinguishers	2.1.5.1.(2) 6.2.1.1.(1)
NFPA	11-2005	Low-, Medium-, and High-Expansion Foam	2.1.3.5.(3) 4.3.2.5.(2)
NFPA	12-2005	Carbon Dioxide Extinguishing Systems	2.1.3.5.(3)
NFPA	12A-2004	Halon 1301 Fire Extinguishing Systems	2.1.3.5.(3)
NFPA	13-2002	Installation of Sprinkler Systems	3.2.1.1.(1) 3.2.2.4.(3) 3.2.3.3.(1) 3.2.4.3.(1)
NFPA	15-2001	Water Spray Fixed Systems for Fire Protection	2.1.3.5.(4) 4.3.2.5.(2)
NFPA	16-2003	Installation of Foam-Water Sprinkler and Foam-Water Spray Systems	2.1.3.5.(4)

5.5.5.4. Refrigerated Storage

1) Refrigerators described in Sentence 4.1.4.1.(2) shall be identified in conformance with Article 3.2.7.14.

2) Class I liquids that are stored in refrigerators shall be kept in closed containers.

5.5.5.5. Highly Unstable Substances

(See Appendix A.)

1) Where unstable substances, such as perchloric acid, are heated above normal ambient temperature, it shall be done in a separate power-ventilated enclosure

a) conforming to Articles 5.5.4.3. and 5.5.4.4., and

b) displaying conspicuously posted instructions specifying that the enclosure is to be used for this application only.

2) The power-ventilated enclosure required by Sentence (1) as well as its exhaust duct system shall be washed after each use to prevent the accumulation of highly unstable deposits. (See Appendix A.)

3) Unstable substances, such as perchloric acid, shall not be heated with an open flame or in a hot oil bath.

5.5.5.6. Chemical Wastes

1) Wastes from *dangerous goods* shall be

a) identified to prevent accidental mixing of incompatible chemicals, and

b) included in the quantities specified in Article 5.5.5.1.

Section 5.6. Construction and Demolition Sites**5.6.1. General****5.6.1.1. Application**

(See Appendix A)

1) This Section applies to fire safety for *buildings*, parts of *buildings*, facilities, adjacent *buildings* or facilities and associated areas undergoing construction, alteration or demolition operations. ★

5.6.1.2. Protection of Adjacent Building ★

1) Protection shall be provided for exposed adjacent *buildings* or facilities from fire originating from *buildings*, parts of *buildings*, facilities and associated areas undergoing construction, alteration or demolition operations. (See Appendix A.)

5.6.1.3. Fire Safety Plan ★

1) Except as required in Sentence (2), prior to the commencement of construction, alteration or demolition operations, a fire safety plan shall be prepared for the site and shall include

a) the designation and organization of site personnel to carry out fire safety duties, including a fire watch service if applicable,

b) the emergency procedures to be followed in the event of a fire, including

i) initiating a fire warning,

ii) notifying the fire department,

iii) instructing site personnel on the procedures to be followed once the warning has been initiated, and

iv) confining, controlling and extinguishing the fire,

c) measures for controlling fire hazards in and around the *building* (see Appendix A), and

d) a maintenance procedure for firefighting measures required in Section 5.6.

2) Where construction, alteration or demolition operations occur in an existing *building* that is required to have a fire safety plan conforming to Section 2.8., the fire safety plan shall take into account the changes occurring to the *building*.

5.6.1.4. Access for Firefighting

1) Unobstructed access to fire hydrants, portable extinguishers and to fire department connections for standpipe and sprinkler systems shall be maintained.

2) A means shall be provided for firefighters to allow for firefighting on all levels of the *building*.

3) Provision shall be made for the use of existing elevators, hoists or lifts to assist such personnel in reaching all levels of the *building*.

4) Access routes for fire department vehicles shall be provided and maintained to construction and demolition sites.

5) Where a construction or demolition site is fenced so as to prevent general entry, provision shall be made for access by fire department equipment and personnel.

5.6.1.5. Portable Extinguishers

1) In addition to the other requirements of this Code, portable extinguishers shall be provided in unobstructed and easily accessible locations

- a) where hot work operations are carried out,
- b) where combustibles are stored,
- c) near internal combustion engines,
- d) where *combustible liquids, flammable liquids* or gases are stored or handled, and
- e) where temporary fuel-fired equipment is used.

2) The extinguishers required by Sentence (1) shall have a minimum rating of

- a) 2-A:10-B:C on moveable equipment, and
- b) 4-A:40-B:C in all other locations.

5.6.1.6. Standpipe Systems

(See Appendix A)

1) Where a standpipe system is to be installed in a *building* under construction or alteration, the system shall be installed progressively in conformance with Subsection 3.2.5. of Division B of the Alberta Building Code 2006 in areas permitted to be occupied.

2) Where a standpipe is to be installed in portions of a *building* under construction or alteration that is not occupied

- a) a permanent or temporary standpipe system is permitted in accordance with Clauses (b) and (c),
- b) the standpipe system shall be provided with conspicuously marked and readily accessible fire department connections on the outside of the *building* at the *street* level and shall have at least one hose outlet at each floor,
- c) the pipe size, hose valves and water supply shall be in accordance with Subsection 3.2.5. of Division B of the Alberta Building Code 2006,
- d) the standpipes system shall, as a minimum, be securely supported and restrained at each alternate floor,
- e) at least one hose valve for attaching fire department hose shall be provided at each intermediate landing or floor level in the *exit* stairway,
- f) hose valves shall be kept closed at all times and guarded against mechanical damage,
- g) the standpipe shall be not more than one floor below the highest forms, staging, and similar combustibles at all times, and
- h) temporary standpipe systems shall remain in service until permanent standpipe installation is complete.

3) Where a *building* being demolished floor by floor is equipped with a standpipe system, the system, together with fire department connections and valves, shall be

maintained in operable condition on all *storeys* below the one being demolished, except for the *storey* immediately below it.

5.6.1.7. Hot Surface Applications and Hot Works

- 1) Any activity that involves heat sources and hot processes shall be considered hot works and shall conform to the requirements in Sentences (2) and (3) and Section 5.2.
- 2) Bitumen kettles shall
 - a) not be located on roofs,
 - b) be provided with adequate metal covers that are close-fitting and constructed of steel having a thickness of not less than No. 14 standard gauge,
 - c) be under constant supervision when in operation, and
 - d) be maintained free of excessive residue.
- 3) Mops that have been used for spreading bitumen shall be kept outside the *building* in a safe location when not in use.

5.6.1.8. Provision for Egress

- 1) In areas of a *building* where construction, alteration or demolition operations are taking place, at least one *exit* shall be accessible and usable at all times.
- 2) In *buildings* being demolished, at least one stairway shall be maintained in usable condition at all times.

5.6.1.9. Fire Warning

- 1) A means shall be provided to alert site personnel of a fire and such a means shall be capable of being heard throughout the *building* or facility.

5.6.1.10. Building Services at Demolition Sites

- 1) Except as required in Sentence (2) and except for water supplies for firefighting, *building* services shall be terminated at a point located outside the *building* or part thereof being demolished. (See Appendix A.)
- 2) The service company whose service connections will be affected shall be notified before any action described in Sentence (1) is taken and, if it is necessary to maintain any service, it shall be
 - a) relocated as necessary, and
 - b) protected from damage.
- 3) Temporary service installations shall be installed in conformance with regulations made pursuant to the Safety Codes Act.

5.6.1.11. Ignition Sources

- 1) Devices capable of producing ignition, internal combustion engines, temporary heating equipment and associated devices shall be kept at a safe distance from combustible material so as not to cause ignition. (See Appendix A.)
- 2) The clearance between combustible materials and temporary heating equipment, including *flues*, shall be in conformance with Part 6 of Division B of the Alberta Building Code 2006 or in conformance with the minimum clearances shown on certified heating equipment.

5.6.1.12. Fuel Supply Installation

- 1) Fuel supplies for heating equipment and internal combustion engines shall conform to
 - a) CAN/CSA-B139, "Installation Code for Oil-Burning Equipment," or
 - b) gas regulations made pursuant to the Safety Codes Act.

5.6.1.13. Tank, Piping and Machinery Reservoir Safety at Demolition Sites

★ **1)** Tanks, piping and machinery reservoirs at a demolition site shall be taken out of service in conformance with Subsection 4.3.15.

2) Tanks, piping and machinery reservoirs at a demolition site that contain *combustible liquids* or *flammable liquids* or that are likely to contain flammable vapours shall be drained and, except as permitted by Sentence (3), removed prior to the demolition of the *building*.

3) Where it is impracticable to remove tanks, piping or machinery reservoirs from the *building* prior to demolition, such equipment shall be conspicuously identified and removed as soon as conditions permit.

4) Tanks, piping and machinery reservoirs referred to in Sentences (1), (2) and (3) that once contained *combustible liquids*, *flammable liquids* or flammable vapours shall be purged with inert materials prior to demolition to prevent an explosion. (See Appendix A.)

5.6.1.14. Fire Separations in Partly Occupied Buildings

1) Where part of a *building* continues to be occupied, the occupied part shall be separated from the part being demolished or constructed by a *fire separation* having a *fire-resistance rating* of not less than 1 h.

5.6.1.15. Watch

1) A watch, with tours at intervals of not more than 1 h, shall be provided throughout demolition sites when there are occupants in the portion of the *building* not being demolished.

2) Except where a *building* is provided with a fire alarm system or similar equipment, a watch, with tours at intervals of not more than 1 h, shall be provided when a portion of the *building* is occupied while construction operations are taking place.

★ **3)** Facilities shall be provided to enable the watcher referred to in Sentences (1) and (2) to

- a) ensure a fire warning is sounded to notify occupants, and
- b) communicate with the fire department.

5.6.1.16. Smoking Restrictions

1) Smoking shall be permitted only if Subsection 2.4.2. is complied with.

★ 5.6.1.17. Dangerous Goods Storage and Use

1) *Flammable liquids* and *combustible liquids* shall be stored and used in conformance with Part 4.

2) *Dangerous goods* shall be stored in conformance with Part 3.

3) *Dangerous goods* shall be used in conformance with Part 5.

5.6.1.18. Temporary Enclosures

1) Fabrics and films used to temporarily enclose *buildings* shall be securely fastened to prevent them from being blown against heaters or other ignition sources.

5.6.1.19. Disposal of Combustible Refuse

1) Combustible refuse in sufficient quantities to constitute a fire hazard shall be moved to a safe location. (See also Subsection 8.2.5. of Division B of the Alberta Building Code 2006.)

5.6.1.20. Protection during Shutdown ★

1) Except as permitted in Sentence (2), where a fire protection system is provided, it shall remain operational throughout the construction, alteration or demolition area where reasonably practical.

2) When any portion of a fire protection system is temporarily shut down during construction, alteration or demolition operations, protection during shutdown shall comply with Article 6.1.1.4.

5.6.1.21. Occupied Buildings

1) When a *building* is occupied prior to its completion or during extensive alterations to it, fire safety measures in the occupied portions of the *building* shall be maintained or alternate provisions made.

2) Measures shall be taken to cordon off and control access to the work areas.

3) Required *exits* from the occupied area shall be maintained or alternate *means of egress* shall be provided. (See Appendix A.)

5.6.2. Excavation**5.6.2.1. Services Shut-off**

1) Except as provided in Article 5.6.2.2., before excavation begins, *building* services shall be shut off, terminated and labelled so as to permit them to be easily identified outside the limits of the excavation. (See also Sentence 5.6.1.10.(1))

2) The service company whose service connections will be affected shall be notified before any action described in Sentence (1) is taken and, if it is necessary to maintain any service, it shall be

- a) relocated as necessary, and
- b) protected from damage.

5.6.2.2. Maintaining Existing Services

1) Existing gas, electrical, water, steam and other services are permitted to be left within the area of the excavation provided that

- a) before work begins, the service company concerned has approved the proposed method of operation,
- b) the location of the services is determined before excavation commences,
- c) a suitable method of excavation is adopted that will ensure that the services are not damaged, and
- d) the services are provided with suitable temporary supports.

Section 5.7. Fireworks**5.7.1. Fireworks**

(See Appendix A.)

5.7.1.1. Application

1) Except as permitted by Sentence (2), this Section shall apply to the sale and discharge of *fireworks* and pyrotechnic devices.

2) This Section shall not apply to a person who possesses or discharges *fireworks* commonly used as distress flares.

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Table A-1.3.1.2.(1) (Continued)

Issuing Agency	Document Number	Title of Document	Code Reference
NFPA	30B-2002	Manufacture and Storage of Aerosol Products	A-3.2.5.2.(1)
NFPA	36-2004	Solvent Extraction Plants	A-4.1.1.1.(2)
NFPA	55-2005	Storage, Use, and Handling of Compressed Gasses and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks	A-3.1.1.4.
NFPA	61-2002	Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities	A-5.3.1.3.(2)
NFPA	80A-2001	Protection of Buildings from Exterior Fire Exposures	A-2.4.1.1.(6)
NFPA	91-2004	Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids	A-5.3.1.3.(2)
NFPA	120-2004	Fire Prevention and Control in Coal Mines	A-5.3.1.3.(2)
NFPA	326-2005	Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair	A-4.3.15.3.(1) A-5.6.1.13.(4)
NFPA	484-2006	Combustible Metals, Metal Powders, and Metal Dusts	A-5.3.1.3.(2)
NFPA	497-2004	Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas	A-4.1.4.1.(1)
NFPA	654-2006	Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids	A-5.3.1.3.(2)
NFPA	655-2001	Prevention of Sulfur Fires and Explosions	A-5.3.1.3.(2)
NFPA	664-2002	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	A-5.3.1.3.(2)
NFPA	705-2003	Field Flame Test for Textiles and Films	A-2.3.2.2.(1)
NFPA	1142-2001	Water Supplies for Suburban and Rural Firefighting	A-3.3.2.16.(1)(b)
NRCan	1985	Explosives Act and its Regulations	A-3.2.9.1.(1)
OCIMF	1991	Guide to Purchasing, Manufacturing and Testing of Loading and Discharge Hoses for Offshore Moorings, 4th Edition	A-4.8.8.1.(1)(a)
RMA	IP-2-2003	Hose Handbook, Seventh Edition	A-4.8.8.1.(1)(a)
SFPE	3rd Edition	Handbook of Fire Protection Engineering	A-4.1.6.1.(1)
TC		Transportation of Dangerous Goods Act and its Regulations (TDGR)	A-3.2.7.6.(2) A-4.1.2.1. A-4.2.2.3.(2)
TC		Oil Pollution Prevention Regulations of the Canada Shipping Act	A-4.8.8.1.(1)(a)
ULC	CAN/ULC-S109-03	Flame Tests of Flame-Resistant Fabrics and Films	A-2.3.1.3.(2)
ULC	CAN/ULC-S553-02	Installation of Smoke-Alarms	A-2.1.3.3.(3)
ULC	CAN/ULC-S603.1-03	External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids	A-4.3.9.3.(2)
ULC	ULC-S603(A)-2001	Refurbishing of Steel Underground Tanks for Flammable and Combustible Liquids	A-4.3.8.3.(2)
ULC	ULC-S615(A)-2002	Refurbishing of Reinforced Plastic Underground Tanks for Petroleum Fuels	A-4.3.8.3.(2)
ULC	ULC/ORD-C58.9-1997	Secondary Containment Liners for Underground and Aboveground Flammable and Combustible Liquid Tanks	A-4.3.8.1.(6)(b)
ULC	ULC/ORD C58.12-1992	Leak Detection Devices for Underground Flammable Liquid Storage Tanks	A-4.3.8.1.(6)(e)
ULC	ULC/ORD-C107.12-1992	Line Leak Detection Devices for Flammable Liquid Piping	A-4.3.8.1.(6)(f)
ULC	ULC/ORD-C410A-1994	Absorbents for Flammable and Combustible Liquids	A-4.1.6.3.(3)(b)
ULC	ULC/ORD-C971-2005	Nonmetallic Underground Piping for Flammable and Combustible Liquids	A-4.3.8.1.(6)(b)

Table A-1.3.1.2.(1) (Continued)**Notes to Table A-1.3.1.2.(1):**

(1) Code reference is in Division A.

A-2.1.2.1.(1) The Alberta Building Code 1990 introduced changes to the method of determining building height. Application of the current method to existing buildings for the purposes of this Code could result in certain buildings being reclassified as higher buildings. For this reason, the Alberta Fire Code 2006 suggests that building height is that which was established by the building code that was applicable at the time of construction in the case of original construction, or at the time of alteration if additional storeys have been added to the building.

A-2.1.2.2.(1) Arena-type buildings are often used for events such as community dances, rallies and trade shows. These events may increase the occupant and fuel loads beyond that for which the space was designed. To ensure safety during such events, additional egress facilities may be required to compensate for the additional occupant load and, in some cases, additional fire suppression measures may be required to compensate for the increased fuel load.

Large public corridors in mercantile occupancies are also used on a temporary basis for community activities, merchandising and for special displays. In these cases, additional egress facilities and fire suppression may be needed, depending on the increase in hazard.

A-2.1.3.1.(1) The Alberta Building Code 2006 is most often applied to existing buildings when an owner wishes to rehabilitate a building, change its use, or build an addition; or when an enforcement authority decrees that a building, or a class of buildings, be altered for reasons of public safety. It is not intended that either the Alberta Building Code 2006 or the Alberta Fire Code 2006 be used to enforce the retrospective application of new requirements in the Alberta Building Code 2006 to existing buildings. Although the Alberta Fire Code 2006 could be interpreted to require the installation of fire alarm, standpipe and hose and automatic sprinkler systems in an existing building for which there were no requirements before the Alberta Building Code 2006 was issued, it is the intent that the Alberta Fire Code 2006 not be applied in this manner to these buildings.

It is usually difficult to change structural features of an existing building when undertaking alterations or additions, but the installation of “active” fire protection systems, such as alarms, sprinklers and standpipes, in existing buildings may be possible. These systems may be considered as contributing to an adequate degree of life safety in cases where the structural features of a building do not conform to the Alberta Building Code 2006.

Sentence 2.1.3.1.(1) is intended to address the installation of fire alarm, sprinkler and standpipe systems in existing buildings presently not so equipped, and in existing buildings that do not provide an acceptable level of safety to meet the current installation standards specified in the Alberta Building Code 2006. It is not intended that existing fire protection systems that provide an acceptable level of life safety be upgraded with each new edition of the Alberta Building Code or in conjunction with the inclusion of new requirements not in force at the time that a building was constructed. The authority having jurisdiction is expected to use discretion in enforcing this requirement. The authority having jurisdiction may accept alternatives to strict compliance with the Alberta Building Code 2006 as provided for in Clause 1.2.1.1.(1)(b) of Division A and its Appendix Note. (See also Appendix Note A-1.1.1.1.(1) of Division A and Appendix Note A-1.1.1.1.(1) of Division A of the Alberta Building Code 2006.)

A-2.1.3.3.(3) Part 3 and Part 9 of Division B of the Alberta Building Code 2006 and CAN/ULC-S553, “Installation of Smoke-Alarms,” contain additional information for locating, installing and interconnecting smoke alarms in dwelling units.

A-2.1.3.3.(4) It is not the intent of this Sentence to restrict the use of battery-operated smoke alarms that are installed in addition to required smoke alarms. The requirements ensure that properties constructed after July 5, 1977 are protected by smoke alarms, with permanent connections to an electrical circuit, installed in accordance with the Alberta Building Code.

A-5.5.5.5. Unstable substances are capable of a rapid release of energy by themselves. They are susceptible to reactions when exposed to air, water, pressure, heat, shock, vibration, light or sound waves. These reactions include vigorous polymerization or self-accelerating decomposition.

These substances must be stored, handled, used and processed in a location and manner that will prevent an undesired reaction. Material Safety Data Sheets provide guidance based on the properties of the unstable substance.

Perchloric acid is the most commonly used unstable substance in laboratories. Examples of other unstable substances are hydrazine, peracetic acid, picric acid and sodium hydride. Article 5.5.5.5. has been written specifically for perchloric acid and is not intended to be applied to other unstable substances unless they have properties similar to perchloric acid.

A-5.5.5.5.(2) Water can only be used if the unstable substance is compatible. (Perchloric acid is an example of a substance that is compatible with water.) Material Safety Data Sheets indicate whether an unstable substance is compatible with water and provide guidance on the properties and other incompatibilities of the unstable substance.

A-5.6.1.1. The degree of application should be determined in advance in conjunction with the authority having jurisdiction. In construction, alteration or demolition operations that do not pose an exposure hazard to other buildings, or to occupants, the degree of application of Section 5.6. may be minimal. ★

The degree of application of Section 5.6. to each operation should be determined in advance, as part of the fire safety plan for the operation, taking into consideration such issues as the size of the operation, exposure hazards to adjacent buildings or facilities and the site conditions. Operations can range from large multi-storey buildings to small single-storey residences and may include additions or alterations to existing buildings.

A-5.6.1.2. Methods or materials to protect adjacent buildings or facilities can range from active to passive systems such as spatial separation, installing water curtains, using construction methods and materials that may include gypsum sheathing, or erecting a temporary fire barrier such as fire tarpaulin. ★

A-5.6.1.3.(1)(c) The control of fire hazards in and around buildings being constructed, renovated or demolished includes fire protection for combustible construction materials and combustible refuse on the site. The sizes of piles of materials and refuse and the location of such piles in relation to adjacent buildings are factors that should be taken into consideration in determining which fire protection measures to implement. The selection of fire protection measures for demolition operations will also depend on the demolition procedure being used, the specific conditions existing on the site and the firefighting capabilities of the responding fire department. ★

It is the intent of this Code that requirements regarding the outdoor storage of materials stated in Section 3.3. be referred to and applied at construction and demolition sites.

A-5.6.1.6. It is not expected that all aspects of Subsection 3.2.5. of Division B of the Alberta Building Code 2006 are applicable to buildings, parts of buildings, facilities and associated areas undergoing construction, alteration or demolition operations for unoccupied areas. ★

When the temperature causes freezing conditions, the standpipe should be drained to prevent damage to the equipment. It is not expected that hoses and nozzles be made available in the building under construction, alteration or demolition operations, as they will be brought to the relevant floor by the responding fire department.

This requirement applies only in areas where the standpipe is required under the Alberta Building Code for that building.

A-5.6.1.10.(1) A safe area for the location of terminated building services, such as gas and fuel lines, electrical lines, water and steam piping, is in an area away from the building or part thereof that is safe enough so as not to ★

cause damage to the building or part thereof in the event of their accidental breakage. In some cases, terminated services can be located directly outside the building or part thereof if adequate protection is provided, and in others, they can be located at the property line and/or service connection.

- ★ **A-5.6.1.11.(1)** Minimum clearances shown on certified heating equipment or as described in Part 6 of Division B of the Alberta Building Code 2006 should be provided between combustible materials and temporary heating equipment, including flues such as exhaust discharges from internal combustion engines.

A-5.6.1.13.(4) Guidance on methods of rendering inert tanks, piping and machinery reservoirs is available in NFPA 326, "Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair."

A-5.6.1.21.(3) Where exits are obstructed by construction while the building is occupied, an alternative means of egress must be established. Replacing a window with a door and providing the necessary step and walkway could be an acceptable temporary solution.

A-5.7.1. Municipalities have the authority to regulate fireworks within their jurisdiction under the Municipal Government Act. Municipalities can use the Municipal Government Act to establish a fireworks permit bylaw allowing the municipality to permit fireworks. A fireworks permit bylaw established by a municipality may have provisions that include or exclude any activity involving fireworks.

A-5.7.1.7. Due to the fact that fireworks can be purchased in one municipality and discharged in another, individuals must ensure that written permission is obtained from all of the appropriate authorities if this is the case.

A-6.1.1.2.(1) Both the Alberta Building Code 2006 and the Alberta Fire Code 2006 assume that all fire protection features of a building, whether required by Code or voluntarily installed, will be designed in conformance with good fire protection engineering practice and will meet the appropriate installation requirements in relevant standards. Such good design is necessary to ensure that the level of public safety established by the Code requirements is not reduced by a voluntary installation. Thus, a voluntarily installed system should be maintained in operating condition, at least to the extent that it was originally intended to function, in conformance with the applicable installation standards.

A-6.1.1.3.(1) Notification of planned or emergency interruption or curtailment of service of fire protection installations is preferably given in advance when possible. The parties to be notified who could be affected may include, but are not necessarily limited to, the fire department, supervisory staff in the building and the occupants of the building.

A-6.1.1.3.(3) Water supply systems, whether municipally or privately owned, form an essential component of most fire suppression systems. When planning firefighting strategies and tactics, fire departments place a great deal of reliance on an adequate and dependable supply of water.

The responsibility for the inspection and maintenance of these water supply systems often rests with persons outside the control of the fire department. In many cases, the system is maintained and serviced by a water works or engineering department or by an outside agency.

No matter who is responsible for the system, it is essential that the agencies develop a cooperative approach and that they work together to ensure the best possible protection for the public. Failure to notify the fire department that a hydrant is out of service or that a water main has broken can cause delays, which may result in the loss of lives or excessive damage to property. Such neglect may also expose a municipality or an individual to litigation, which could otherwise be avoided.

A-6.1.1.4.(1) Interruption of normal operation of a fire protection system for any purpose constitutes a "temporary shutdown." Types of interruptions include, but are not limited to, periodic inspection or testing, maintenance, and repairs. During a shutdown, alternative measures are necessary to ensure that the level of safety intended by the Code is maintained.

In the shutdown of a fire alarm system, alternative measures should be worked out in cooperation with the fire department to ensure that all persons in the building can be promptly informed, and the fire department notified, should a fire occur while the alarm system is out of service.

When a sprinkler system is shut down, measures that can be taken include the provision of: emergency hose lines and portable extinguishers, extra fire watch service and, where practicable, temporary water connections to the sprinkler system.

A-6.3.1.3.(1) The referenced document provides for regular testing and review of the central station facilities and of the connections to the premises containing the fire alarm system. The Code does not mandate a particular series of events from initiation of the fire alarm signal circuits in the building to notification of the fire department. In some cases, the signals to the central station are automatically forwarded to the fire department, whereas in others, the central station initiates the notification of the fire department.

A-6.3.1.4.(2) Sentence 6.3.1.4.(2) is intended to ensure that a voice communication system that is not tested as part of an associated fire alarm system, but that will be relied upon during a fire emergency, will be tested periodically.

A-6.4.1.1.(1) Water-based fire protection systems include sprinkler systems, standpipes, private hydrants, hose systems, water spray fixed systems, foam-water sprinkler systems, foam-water spray systems, and fire pumps.

A-6.5.1.1.(2) CAN/CSA-Z32, "Electrical Safety and Essential Electrical Systems in Health Care Facilities," contains requirements over and above those relating specifically to the inspection, testing and maintenance of emergency equipment: compliance with these other requirements is not intended by the reference in Sentence 6.5.1.1.(2). The standard defines three classes of health care facilities—Class A, Class B, and Class C—but applies only to Class A and Class C facilities. Class B facilities, which accommodate people who, as a result of physical or mental disabilities, are unable to function independently and need daily care by health care professionals, are covered by CAN/CSA-C282, "Emergency Electrical Power Supply for Buildings."

A-6.5.1.5.(1) This can be achieved by replenishment as the result of the routine test program required by Article 6.5.1.1.

A-7.2.1.1.(1) It is not intended that all equipment be tested on each test occasion. A representative number of devices may be tested on each occasion provided all equipment is tested within the time period agreed to in the fire safety plan.

A-7.2.3.4. In practice, the only way the owner can be realistically expected to maintain ventilation equipment properly is if they have a detailed record of all the equipment plus a description of its intended operation.

A-7.3.1.1.(1) The testing required in Section 7.3. is not intended to be a complete assessment of the design of the smoke control system, but only a test of the individual pieces of equipment specified.

A-7.3.2.1.(2) It is intended that 1/3 of the system be checked each year so that at the end of each three year period the entire system has been tested.

