

DRAFT DOCUMENT — FOR DISCUSSION PURPOSES ONLY

DRAFT

THIS BASELINE DOCUMENT IS PRESENTED FOR DISCUSSION PURPOSES IN REGULATION FORMAT FOR CONVENIENCE ONLY AND IS NOT, IN ANY WAY, TO BE VIEWED AS A LEGAL DOCUMENT. ALL DISCUSSION DOCUMENTS WILL BE SUBJECT TO FURTHER REVIEW BY LEGISLATIVE COUNSEL AND LEGAL COUNSEL WITH THE MINISTRY OF THE ATTORNEY GENERAL.

GAS SAFETY REGULATION

DRAFT



**BRITISH
COLUMBIA**

**Ministry of Community,
Aboriginal and Women's Services**

DRAFT DOCUMENT — FOR DISCUSSION PURPOSES ONLY

DRAFT DOCUMENT — FOR DISCUSSION PURPOSES ONLY

THIS BASELINE DOCUMENT IS PRESENTED FOR DISCUSSION PURPOSES IN REGULATION FORMAT FOR CONVENIENCE ONLY AND IS NOT, IN ANY WAY, TO BE VIEWED AS A LEGAL DOCUMENT. ALL DISCUSSION DOCUMENTS WILL BE SUBJECT TO FURTHER REVIEW BY LEGISLATIVE COUNSEL AND LEGAL COUNSEL WITH THE MINISTRY OF THE ATTORNEY GENERAL.

GAS SAFETY REGULATION

Definitions	2
Part 1 – General Qualification and Licensing Provisions	5
Division 1 – Individuals Who May Perform Regulated Work	5
Individuals who may perform gas work	5
Division 2 – Certificates Of Qualification	6
What all applicants for a certificate of qualification must do	6
Class A gas fitter certificate of qualification	6
Class B gas fitter certificate of qualification	6
Duty of gas fitter to notify of need to repair	7
Gas fitter may make temporary repairs	7
Gas appliance service certificate of qualification	7
Gas piping certificate of qualification	7
Recreation vehicle installation and service certificate of qualification	7
Liquefied petroleum gas vehicle conversion certificate of qualification	8
Compressed natural gas vehicle conversion certificate of qualification	8
Compressed natural gas and liquid petroleum gas vehicle conversion certificate of qualification	8
Gas venting certificate of qualification	9
Gas utility certificate of qualification	9
Special purpose gas certificate of qualification	9
Class A or class B certificates for individuals with qualifications from elsewhere in Canada	9
How a certificate of qualification holder can become a field safety representative	10
Division 3 – Contractor’s License	10
Application requirements for gas contractor’s license	10
Surety may be required to rectify non-compliance	10
Duties of a licensed gas contractor	10
Part 2 – Requirements For Permits And Regulated Products	10
Division 1 – Permits	10
Persons who may apply for permits to do regulated work in respect of gas systems	10
Permits that may be issued by a local government	11
Homeowner may perform work under a permit	11
Drawings to accompany permit application	11
Permit is also authorization	12
Temporary entertainment installation permit	12
Requirements concerning operating permits	12
Field safety representatives optional for operating permit applicants	14
Maintenance and reporting duties of some operating permit holders	14
Division 2 – Information About Existing Gas System	14
Authorization to obtain information about an existing gas system	14
Division 3 – Regulated Product Standards and Certification	14
Application of this regulation	14
Canadian gas standards adopted as B.C. Natural Gas and Propane Code	15
No installation of gas appliances unless certified or approved	15
Approved testing and certification agencies	15

Gas appliances with input of 120 kW or less exempted	16
Dealers to maintain records of gas appliances	16
Division 4 – Inspections	16
Duty to inform regulatory authority of completion of work for inspection	16
Part 3 – Safety Officers	17
Safety officer’s certificate of qualification	17
Part 4 - Incident reporting.....	17
Reporting incidents to a safety manager.....	17
Part 5 – Technical Requirements.....	17
Division 1 – Requirements and Procedures for Installations and Excavations.....	17
Pipe to be above ground where entering building	17
Connection for pressure gauge to be satisfactory	17
Tracer wire required for non-metallic gas installations	17
Procedures for a gas installation in vicinity of underground structures.....	18
Duties of persons intending to construct near gas installation.....	18
Procedures for excavations.....	18
No probing to locate gas installations.....	19
Requirements for blasting in vicinity of gas installation	19
Emergency excavation procedures	19
Procedure for backfilling an excavation when gas installation exposed.....	20
Procedure if gas escapes	20
Procedure if there is damage to gas installation	20
Procedure when gas installation exposed	20
Procedure if gas fittings exposed.....	20
Procedures in respect of cathodic protection devices	21
Procedure if damage to protective wrapping occurs.....	21
Test charts or reports to be provided on request.....	21
Provincial safety manager may require pressure tests	21
Duty of gas company to file construction standards with provincial safety manager.....	21
Division 2 – Installation and Repair Procedures for Appliances and Gas Systems.....	21
Turning gas supply on and off.....	21
Unrepairable appliance.....	22
Duties of owner of rental premises concerning gas appliances	22
Gas fitter’s tag to be affixed on completion of work	22
Adjustments on connection to gas line	22
Testing after disconnection.....	22
Notice to gas company if input greater than 45 kW	23
Odorization	23
Propane containers to be filled correctly	23
Schedule – Variations for B.C. Natural Gas and Propane Code to the National Code.....	23

Definitions

1 In this regulation:

 “**Act**” means the *Safety Standards Act*;

 “**appliance**” means a regulated product that converts gas into energy and includes any valves, controls, fittings and components attached to or connected to it or intended to be attached to or connected to it;

 “**approved inspecting contractor**” means a person licensed by the ministry under the Safety Standards General Regulation;

- “atmospheric appliance”** means a fan assisted appliance or natural draft appliance;
- “B.C. Natural Gas and Propane Code”** means the code adopted under section 33 (2);
- “city gate”** means the plant or premises where gas received from a pipeline is metered, reduced in pressure and prepared for distribution to individual users of the gas;
- “conversion burner”** means a burner designed to supply gaseous fuel to an appliance originally designed to use another fuel;
- “digester gas”** means a gas produced from the biological treatment of sewage and which is composed of methane, carbon dioxide and hydrogen sulphide or any combination of them;
- “distribution main”** means a pipe used for the transmission and distribution of gas at a pressure of 700 kPa gauge or less for any distance between a city gate and a service pipe;
- “fan assisted appliance”** means a Category 1 appliance in which combustion air is supplied, at sufficient pressure to overcome the resistance of the burner only, by a fan, blower or other similar mechanical device;
- “gas”** means any of the following:
- (a) natural gas, manufactured gas, liquefied petroleum gas, digester gas, landfill gas or a mixture or dilution of any of them;
 - (b) hydrogen;
- “gas company”** means a person engaged in the sale or distribution of gas in British Columbia;
- “gas equipment”** means anything used or designed to be used in connection with gas and includes any of the following:
- (a) piping;
 - (b) appliances;
 - (c) fuel containers;
 - (d) vents;
- “gas fitter”** means an individual who has obtained a certificate of qualification as a gas fitter under this regulation;
- “gas installation”** means a facility or system, including fittings, that is owned or operated by a gas company and is used to store, convey, measure or regulate gas;
- “gas system”** means a system of gas equipment
- (a) that is installed in premises and is downstream of an outlet of a service meter,
 - (b) that uses liquefied petroleum gas and is downstream of a second stage regulator,
 - (c) that is installed other than by or on behalf of a gas company and is upstream of the outlet of a meter or upstream of a second stage regulator,
 - (d) that is installed at a propane bulk plant,
 - (e) that is a vehicle fuel system or a vehicle gas system, or
 - (f) that is used for the production, handling and utilization of digester gas in a wastewater treatment plant or landfill gas at a landfill site;

“gas utility” means a gas company that owns or operates a gas installation for conveying gas from a city gate or bulk storage facility to the outlet of an individual user’s meter set;

“homeowner” means the owner of a single unit dwelling who lives in or genuinely intends to live in that dwelling;

“industry training credential” has the meaning in the *Industry Training Authority Act*;

“landfill gas” means a gas composed of methane, carbon dioxide, water and hydrogen sulphide, or any combination of them, produced from the decomposition of organic waste material at a landfill site;

“licence” means a licence issued by a provincial safety manager in respect of gas systems and gas equipment;

“licensed gas contractor” means a person who holds a licence as a licensed contractor in respect of gas systems;

“liquefied petroleum gas” means a gas composed of a mixture of propane, propylene, butane and butylenes and other hydrocarbons that are gaseous under normal atmospheric conditions of pressure and temperature but can be liquefied under moderate pressure at ambient temperatures;

“manufactured gas” means a gas obtained by the destructive distillation of carbon derived from coal, coke or oil;

“meter” means a device that measures the volume of gas passing through it, and includes any components that are attached or connected to it;

“natural draft appliance” means a Category 1 appliance that has a draft hood or draft diverter and is not equipped with a mechanical device for supplying combustion air;

“natural gas” means a naturally occurring mixture of hydrocarbon gases composed predominantly of methane but which may also contain ethane, nitrogen and propane;

“pipeline” has the meaning in the *Pipeline Act*;

“propane bulk plant” means a facility that is used primarily for the storage of liquefied petroleum gas before distribution to persons or places outside the facility;

“regulatory authority” means the ministry or a local government which provides for an inspection service and has authority to require inspection of regulated work in respect of gas in an area of British Columbia;

“service meter” means a meter that is installed by or on behalf of a gas company;

“service pipe” means a pipe installed by or on behalf of a gas company for the transmission of gas from a distribution main to a meter on the land or premises of the purchaser of the gas;

“single unit dwelling” means any detached building containing only one dwelling unit that is occupied or intended to be occupied as a permanent residence;

“trainee” has the meaning in the *Industry Training Authority Act*;

“vehicle” has the meaning in the *Motor Vehicle Act*;

“vehicle fuel system” means gas equipment installed on a vehicle for the provision of motive power;

“vehicle gas system” means gas equipment used for purposes other than motive power and which is

- (a) used or designed to be used in connection with or for the purpose of the use, distribution or storage of gas, and
- (b) installed on any vehicle or used or designed to be used to supply or dispense gas for use in, on or by a vehicle;

“vehicle refuelling appliance” means a natural gas compressor package, not containing storage, that is designed for use for unattended refuelling of vehicle fuel systems;

“vent” means a conduit or passageway for conveying the products of combustion from a gas appliance to the outside air.

PART 1 – GENERAL QUALIFICATION AND LICENSING PROVISIONS

Division 1 – Individuals Who May Perform Regulated Work

Individuals who may perform gas work

- 2
- (1) An individual must not perform regulated work in respect of a gas system or gas equipment unless the individual
 - (a) holds a valid certificate of qualification issued under this Part,
 - (b) is authorized under this section to perform regulated work in respect of gas without holding a certificate of qualification,
 - (c) is exempted under this regulation,
 - (d) has successfully completed a training program recognized by a provincial safety manager, or
 - (e) is permitted to do so in accordance with section 4 of the Safety Standards General Regulation.
 - (2) An individual, other than an individual referred to in subsection (1) (d) who is an authorized employee of a gas company or who is an individual having permission of a gas company, must not do any of the following:
 - (a) open or make connections with a distribution main or service pipe;
 - (b) disconnect the inlet of a service meter;
 - (c) move a service meter.
 - (3) An individual must not do welding on metallic gas piping unless the individual holds a valid certificate of qualification.
 - (4) An individual must not install or interconnect any non-metallic pipe unless the individual holds a valid certificate of qualification.
 - (5) If, in the opinion of a provincial safety manager, special qualifications are necessary for the type of welding or other skill required to complete an installation safely, the permit may require that that regulated work be done by an individual with the necessary qualifications.

- (6) The chief power engineer of a first or second class plant, as defined in the Power Engineer, Boiler, Pressure Vessel and Refrigeration Safety Regulation, may, for the purposes of carrying out maintenance and repairs, shut off and place back into service the gas system of the plant including, but not limited to, downstream of the service meter up to and including the burners.
- (7) The chief power engineer of a third or fourth class plant, as defined in the Power Engineer, Boiler, Pressure Vessel and Refrigeration Safety Regulation, may, for the purpose of carrying out maintenance on a boiler, disconnect the gas line to a boiler and reconnect the line once the maintenance is complete.

Division 2 – Certificates Of Qualification

What all applicants for a certificate of qualification must do

- 3 (1) All applicants for a certificate of qualification, except applicants for a special purpose certificate, must, in addition to the requirements in section 2 of the Safety Standards General Regulation:
 - (a) pass an examination for that class of certificate, and
 - (b) fulfill any other requirements for that class of certificate as detailed in this regulation.
- (2) A provincial safety manager may set terms and conditions for the renewal or maintenance of any class of certificate of qualification issued under this Division including, but not limited to, fees.

Class A gas fitter certificate of qualification

- 4 (1) An applicant for a class A gas fitter's certificate of qualification must have held a class B gas fitter's certificate of qualification for a minimum of 2 years.
- (2) A class A gas fitter certificate of qualification entitles the holder to perform the installation or alteration of any gas system, except vehicle fuel systems, while employed by a licensed gas contractor or the holder of an operating permit.

Class B gas fitter certificate of qualification

- 5 (1) An applicant for a class B certificate of qualification must
 - (a) be the holder of an industry training credential or be a trainee in plumbing, steamfitting, refrigeration, sprinkler fitting or gas fitting,
 - (b) have held a gas utility certificate of qualification for at least two years, or
 - (c) have an equivalent combination of experience and training acceptable to a provincial safety manager and have attained the standing acceptable to a provincial safety manager in a gas fitting course and examination that have been approved by a provincial safety manager.
- (2) A class B gas fitter certificate of qualification entitles the holder to perform the installation or alteration of the following gas systems while employed by a licensed gas contractor or the holder of an operating permit:
 - (a) atmospheric appliances with draft hoods which bear the certification mark of an approved testing agency;
 - (b) other appliances and vents up to and including 220 kW;

- (c) piping and atmospheric vents.

Duty of gas fitter to notify of need to repair

- 6 If it comes to the attention of a gas fitter that there is a need to have regulated work done by a gas company to any part of a supply system containing unmeasured gas, the gas fitter must immediately notify the gas company of that need.

Gas fitter may make temporary repairs

- 7 If it comes to the attention of a gas fitter that gas is leaking from any part of a gas supply system containing unmeasured gas, the gas fitter
 - (a) must notify the gas company that permanent repairs are necessary, and
 - (b) may make necessary temporary repairs.

Gas appliance service certificate of qualification

- 8 (1) An applicant for an appliance service certificate of qualification must:
 - (a) have successfully completed a course in gas appliance service training acceptable to a provincial safety manager, and
 - (b) be the holder of an appliance repair industry training credential.
- (2) A gas appliance service certificate of qualification entitles the holder to perform the servicing of the following gas systems while employed by a licensed gas contractor or the holder of an operating permit:
 - (a) gas appliances installed for residential use, or
 - (b) light commercial appliances up to an input of 82 kW.

Gas piping certificate of qualification

- 9 (1) An applicant for a gas piping certificate of qualification must:
 - (a) be the holder of a piping industry training credential acceptable to a provincial safety manager, or
 - (b) have had a minimum of 2 years gas fitting experience acceptable to a provincial safety manager.
- (2) A gas piping certificate of qualification entitles the holder, while employed by a licensed gas contractor or the holder of an operating permit, to install and test gas piping.
- (3) The holder of a gas piping certificate of qualification must not install, service or commission gas appliances.

Recreation vehicle installation and service certificate of qualification

- 10 (1) An applicant for a recreation vehicle installation and service certificate of qualification must:
 - (a) provide documented evidence, acceptable to a provincial safety manager, of a minimum of 2 years experience in the installation or repair of recreation vehicle appliances and piping, and
 - (b) have successfully completed a course in recreation vehicle appliance installation and servicing that is acceptable to a provincial safety manager.

- (2) A recreation vehicle installation and service certificate of qualification entitles the holder, while employed by a licensed gas contractor or the holder of an operating permit, to maintain, alter, repair and install vehicle gas systems in recreational vehicles.

Liquefied petroleum gas vehicle conversion certificate of qualification

- 11** (1) An applicant for a liquefied petroleum gas vehicle conversion certificate of qualification must have successfully completed a course in the conversion of vehicles to liquefied petroleum gas that is acceptable to a provincial safety manager and
 - (a) be the holder of a 3 year automotive industry training credential or an equivalent 3 year automotive trade certificate, or
 - (b) provide documented evidence, acceptable to a provincial safety manager, of a minimum of 3 years of automotive tune-up experience.
- (2) A liquefied petroleum gas vehicle conversion certificate of qualification entitles the holder, while employed by a licensed gas contractor or the holder of an operating permit, to maintain, alter, repair and install liquefied petroleum gas vehicle fuel systems.

Compressed natural gas vehicle conversion certificate of qualification

- 12** (1) An applicant for a compressed natural gas vehicle conversion certificate of qualification must:
 - (a) be the holder of a 3 year automotive industry training credential or an equivalent 3 year automotive trade, or
 - (b) have documented evidence, acceptable to a provincial safety manager, of a minimum of 3 years of automotive tune-up experience, and
 - (c) have successfully completed a course in the conversion of vehicles to compressed natural gas that is acceptable to a provincial safety manager.
- (2) A compressed natural gas vehicle conversion certificate of qualification entitles the holder to maintain, alter, repair and install compressed natural gas vehicle fuel systems under an operating permit.

Compressed natural gas and liquid petroleum gas vehicle conversion certificate of qualification

- 13** (1) An applicant for a compressed natural gas and liquid propane gas vehicle conversion certificate of qualification must have successfully completed a course in the conversion of vehicles to compressed natural gas and liquefied petroleum gas that is acceptable to a provincial safety manager
 - (a) be the holder of a 3 year automotive industry training credential or an equivalent 3 year automotive trade certificate, or
 - (b) provide documented evidence of a minimum of 3 years of automotive tune-up experience.
- (2) A compressed natural gas and liquid propane gas vehicle conversion certificate of qualification entitles the holder to maintain, alter, repair and install compressed natural gas and liquefied petroleum gas vehicle fuel systems under an operating permit or while employed by a licensed gas contractor.

Gas venting certificate of qualification

- 14** (1) An applicant for a gas venting certificate of qualification must be the holder of a sheet metal industry training credential.
- (2) A gas venting certificate of qualification entitles the holder, while employed by a licensed gas contractor or the holder of an operating permit, to alter, repair and install venting.

Gas utility certificate of qualification

- 15** (1) An applicant for a gas utility certificate of qualification must have successfully completed 2 years of training in utility installations and additional training satisfactory to a provincial safety manager.
- (2) A gas utility certificate of qualification entitles the holder, while employed by a gas utility and after gas service is interrupted, to do any of the following:
 - (a) relight gas equipment with an input of 120 kW or less;
 - (b) replace thermocouples;
 - (c) make other minor repairs;
 - (d) do safety checks.

Special purpose gas certificate of qualification

- 16** (1) An applicant for a special purpose certificate of qualification must meet the requirements of experience and training acceptable to a provincial safety manager.
- (2) A special purpose certificate of qualification entitles the holder to perform only the regulated work specified by the certificate and only under the conditions specifically endorsed on the certificate.

Class A or class B certificates for individuals with qualifications from elsewhere in Canada

- 17** (1) An applicant for a class A certificate of qualification who holds a gas fitter's certificate issued by another jurisdiction in Canada must:
 - (a) have obtained a class B certificate of qualification,
 - (b) have documented evidence, acceptable to a provincial safety manager, of a minimum of 2 years of experience in the installation and servicing of gas systems, and
 - (c) pass the class A certificate of qualification exam.
- (2) An applicant for a class B certificate of qualification who holds a gas fitter's certificate issued by another jurisdiction in Canada must pass the class B certificate of qualification exam and
 - (a) have successfully completed a gas fitting apprenticeship,
 - (b) have documented evidence, acceptable to a provincial safety manager, of a minimum of 5 years of experience in the installation and servicing of gas systems, or
 - (c) have an equivalent combination of education and experience.

How a certificate of qualification holder can become a field safety representative

- 18** (1) An individual who holds a valid certificate of qualification issued under this Division may apply for a field safety representative's certificate of qualification of a corresponding class.
- (2) Only an individual who holds a class A or class B gas fitter's certificate of qualification as a field safety representative may perform inspections for the purposes of Part 3, Division 2 of the Safety Standards General Regulation.

Division 3 – Contractor's License

Application requirements for gas contractor's license

- 19** (1) An applicant for a gas contractor's license must comply with section 5 of the Safety Standards General Regulation and provide a performance bond in the amount determined by a provincial safety manager.
- (2) The bond as required under subsection (1) may be provided by
- (a) a bond of a surety licensed under the *Insurance Act*, or
 - (b) a bond of the Insurance Corporation of British Columbia.
- (3) Section 5 (a) of the Safety Standards General Regulation does not apply to an application for a gas contractor's license under this Division.

Surety may be required to rectify non-compliance

- 20** (1) If a licensed gas contractor, in the opinion of a provincial safety manager, has failed to comply with the Act, and neglects or refuses to rectify the non-compliance, a provincial safety manager, may require the surety to cause work to be done to rectify the non-compliance up to the maximum amount of the bond.
- (2) If the cost of work required under subsection (1) to rectify a non-compliance exceeds the amount of the bond, the surety must pay the amount of the bond to the minister who may cause that work to be done, up to the amount of the bond, which will ensure maximum safety.

Duties of a licensed gas contractor

- 21** A licensed gas contractor must not allow an individual to do the regulated work coming within the scope of the licence unless the individual is authorized to do so in accordance with this Part.

PART 2 – REQUIREMENTS FOR PERMITS AND REGULATED PRODUCTS

Division 1 – Permits

Persons who may apply for permits to do regulated work in respect of gas systems

- 22** Subject to this regulation, the following persons are eligible to apply for permits to do regulated work in respect of gas systems:
- (a) a licensed gas contractor;
 - (b) an agent of a licensed gas contractor;
 - (c) a person permitted to do so under section 27 (2) (b) or (c);

- (d) a homeowner.

Permits that may be issued by a local government

- 23** If a local government administers a gas inspection service under an agreement under section 5 of the Act, a safety officer appointed by the local government may issue a permit for only the following kinds of regulated work in respect of gas equipment or gas systems:
- (a) regulated work in a single unit dwelling serviced by an individual service meter and supplied with gas at a pressure of 14.0 kPa gauge or less;
 - (b) regulated work in any premises other than a single unit dwelling, if the premises are supplied with gas at a pressure of 14.0 kPa gauge or less and the total load for the building is 120 kW or less.

Homeowner may perform work under a permit

- 24**
- (1) A homeowner may apply for a permit to perform regulated work with respect to gas equipment in a single unit dwelling if
 - (a) no other dwelling or premises is directly attached to the single unit dwelling,
 - (b) no person is being paid to do, or assist the owner in doing, the work, and
 - (c) no part of the dwelling is rented to any person.
 - (2) A homeowner who performs regulated work with respect to gas under a permit issued under subsection (1) must have the work inspected by a safety officer for the regulatory authority or an approved inspecting contractor.
 - (3) Any fee charged by the ministry for a permit issued to a homeowner under subsection (1) does not include the fee for an inspection required under subsection (2).
 - (4) A local government that administers this regulation under an agreement under section 5 of the Act may include the fee for an inspection required under subsection (2) in the fee charged for a permit that the local government issues to a homeowner.
 - (5) The inspection required by subsection (2) must be made immediately following the completion of the regulated work and before the gas supply is turned on.
 - (6) Nothing in subsection (2) prohibits a local government responsible for administering this regulation under an agreement under section 5 of the Act from requiring that all inspections must be performed by safety officers appointed by the local government.
 - (7) Sections 26 and 38 do not apply to a homeowner who performs regulated work under this section.

Drawings to accompany permit application

- 25**
- (1) An applicant for a permit in respect of the following types of gas system or proposed gas system must, if required by a provincial safety manager, provide drawings in support of the application:
 - (a) a gas system with gas pressure in the system of greater than 14.0 kPa gauge;
 - (b) a gas system that has a connected load greater than 120 kW.

- (2) For the purposes of subsection (1) a drawing must be drawn at a scale or in isometric projection, acceptable to a provincial safety manager, showing all the details of the gas system.

Permit is also authorization

- 26**
- (1) Unless otherwise provided in the permit, if the holder of a permit complies with section 38, a permit issued for regulated work in respect of a gas system is sufficient authorization for the use of the gas system.
 - (2) A permit for any of the following is authorization to begin the installation or reinstallation of the appliance but not to test or use the appliance until it has passed inspection or an inspection has been waived by the regulatory authority on conditions specified by the regulatory authority:
 - (a) any direct-fired non-recirculating type make-up heater;
 - (b) a conversion burner, except if it is to be installed in a single family dwelling and has an input of 120 kW or less;
 - (c) a commercial or industrial conversion burner;
 - (d) any direct fired equipment;
 - (e) a forced draft appliance over 409 600 BTU/hour.
 - (3) Despite subsection (2) a provincial safety manager may include in a permit permission to ignite or operate a regulated product before inspection under conditions specified in the permit.

Temporary entertainment installation permit

- 27**
- (1) The owner, operator or other person responsible for a carnival, concession, trade show, travelling show, television or motion picture location or similar activity must obtain a temporary entertainment installation permit before installing gas equipment for that activity.
 - (2) An application for a temporary entertainment installation permit may be made by any of the following:
 - (a) a licensed gas contractor;
 - (b) the owner of the premises where the gas equipment is to be used;
 - (c) the owner, operator or other person responsible for the activity.
 - (3) If the applicant in subsection (2) is not a gas fitter, the applicant must
 - (a) provide the name and certificate of qualification class and number of the gas fitter the applicant has employed to perform the regulated work covered by the permit, and
 - (b) indicate the period of time that the gas equipment will be in operation.

Requirements concerning operating permits

- 28**
- (1) The owner of any of the following must apply in accordance with section 10 of the Safety Standards General Regulation to a provincial safety manager for an operating permit:
 - (a) an industrial or commercial establishment with appliances used for processing or process water heating with a total input greater than 1 500 kW used for purposes other than space heating or domestic water heating;

- (b) a propane bulk plant;
 - (c) an establishment for filling cylinders or vehicle tanks with gas;
 - (d) an establishment where regulated products are installed on vehicles as part of the vehicle fuel system;
 - (e) an establishment where regulated products are installed on vehicles for purposes other than vehicle fuel systems;
 - (f) an establishment supplying portable heating appliances;
 - (g) a portable appliance with an input greater than 300 kW that can be transported from site to site;
 - (h) a utility.
- (2) A person, other than a licensed contractor, who is not required to obtain an operating permit under subsection (1) but needs another kind of permit under the Act may apply instead for an operating permit.
 - (3) All regulated work under an operating permit under subsection (1) (a), (b) or (g) or subsection (2) must be performed by a gas fitter or under the direct supervision of a gas fitter and the gas fitter or field safety representative must complete any records required by the permit.
 - (4) An individual who performs regulated work under an operating permit issued under subsection (1) (d) or (e) must hold the appropriate certificate of qualification and must complete and maintain any records required by the permit.
 - (5) The operator of an establishment who applies for a permit under subsection (1) (d) or (e) must provide, in the required form, a performance bond, in an amount specified by a provincial safety manager, before being issued an operating permit.
 - (6) The holder of an operating permit must keep an accurate record of all regulated work authorized under the permit, including the location and types of the appliances on which regulated work is performed, and must maintain those records for a period of seven years.
 - (7) If an operating permit has been issued under subsection (1) (g) the appliance may be operated only by an individual who has been appropriately trained by
 - (a) the manufacturer of the appliance, or
 - (b) the manufacturer's representative.
 - (8) The holder of an operating permit issued under subsection (1) (a) or (b) must notify a safety manager in writing of any addition to the gas system.
 - (9) Sections 22, 23, 25, 26, 27 and 30 do not apply in respect of operating permits.
 - (10) An individual must not transfer liquefied petroleum gas from one container to another unless the individual has successfully completed a training course, that has been approved by a provincial safety manager, and holds a valid certificate issued following that training course.
 - (11) The owner of portable equipment that is covered under an operating permit issued under subsection (1) (g) must, in writing, notify a safety officer of the location and relocation of the portable equipment each time that the portable equipment is moved to a new site.

Field safety representatives optional for operating permit applicants

- 29** Section 10 (d) of the Safety Standards General Regulation does not apply to an application for an operating permit but the applicant may indicate the name and certificate of qualification number of a field safety representative on the application.

Maintenance and reporting duties of some operating permit holders

- 30**
- (1) Owners of commercial or industrial establishments that contain appliances with total inputs of 1 500 kW or less but greater than 220 kW must ensure that those appliances are properly serviced, repaired and maintained by a licensed gas contractor.
 - (2) An owner of a commercial or industrial establishment must, on the request of a safety manager or safety officer, supply accurate records of any servicing or repairs done in respect to the appliances in subsection (1).
 - (3) A licensed gas contractor must, on an annual basis, supply a provincial safety manager with documentation, in a form that is acceptable to the safety manager, in respect of any regulated work referred to in subsection (1) unless that work is exempted under the regulations from requiring inspection requests or reporting procedures.
 - (4) Nothing in this section must be construed as exempting a person from any permit requirements in respect of the installation or replacement of regulated products or additions to a gas system.

Division 2 – Information About Existing Gas System

Authorization to obtain information about an existing gas system

- 31**
- (1) A person may request information about a gas system by submitting to a provincial safety manager all of the following:
 - (a) an application for the information in a manner acceptable to the provincial safety manager;
 - (b) if the applicant is not the owner of the premises, the written consent of the owner of the premises to access the information;
 - (c) any required fee.
 - (2) For the purposes of subsection (1), a provincial safety manager may authorize a person to release the required information to the applicant.
 - (3) In addition to the release of information under subsection (2), the regulatory authority may, on payment of any required inspection fee, conduct an inspection of the gas system.

Division 3 – Regulated Product Standards and Certification

Application of this regulation

- 32** This regulation does not apply to any of the following:
- (a) a pressure vessel as defined in the Power Engineer, Boiler, Pressure Vessel and Refrigeration Safety Regulation;

- (b) any pipe in which anything is transmitted at a pressure of greater than 700 kPa gauge, other than gas equipment installed in premises downstream of an outlet of a gas company's service meter or gas equipment in a vehicle gas system;
- (c) a piping system used to refine or process gas in any way;
- (d) an internal combustion engine, turbine or any other prime mover;
- (e) a pipeline;
- (f) a vehicle fuel system approved under the *Motor Vehicle Safety Act* (Canada).

Canadian gas standards adopted as B.C. Natural Gas and Propane Code

- 33** (1) In this section, “**national code**” means the following codes or standards as amended from time to time and each new edition of the code or standard as issued from time to time:
- (a) CSA-B149.1 Natural Gas and Propane Installation Code;
 - (b) CSA-B149.2 Propane Storage and Handling Code;
 - (c) the National Standard of Canada CAN/CGA-B149.3 Code for the Field Approval of Fuel-Related Components on Appliances and Equipment;
 - (d) the National Standard of Canada CAN/CGA-B109 Natural Gas for Vehicles Installation Code;
 - (e) the National Standards of Canada CAN/CSA-Z662, Oil and Gas Pipeline Systems;
 - (f) the National Standard of Canada CAN/CGA-B105 Code for Digester Gas and Landfill Gas Installations;
 - (g) CSA B214 Installation Code for Hydronic Heating Systems.
- (2) The national code is adopted by reference, with the changes set out in the Schedule, as the B.C. Natural Gas and Propane Code.

No installation of gas appliances unless certified or approved

- 34** (1) An appliance must not be installed unless
- (a) it has been tested and certified by an approved certification agency, or
 - (b) it has been approved for use under section 10 of the Act.
- (2) Subsection (1) does not apply to an appliance with a maximum input below 120 kW which is being reinstalled, but no appliance may be reinstalled unless it has been examined and repaired if necessary and certified to be in safe working condition by a gas fitter.
- (3) A person must not use a portable heater for temporary heating unless the heater bears a current decal valid for 2 years applied by a gas fitter certifying as to its safety and operation.

Approved testing and certification agencies

- 35** (1) The following are approved certification agencies for the purposes of this regulation:
- (a) Canadian Standards Association;

- (b) Underwriter Laboratories of Canada Ltd.;
- (c) Underwriter Laboratories Inc.;
- (d) Intertek Testing Services NA Ltd.;
- (e) OMNI-Test Laboratories Inc.

- (2) Despite subsection (1), a provincial safety manager may approve an organization to conduct special tests and to certify gas appliances and equipment in the Province.

Gas appliances with input of 120 kW or less exempted

- 36** (1) An appliance with a maximum input of 120 kW or less that is being reinstalled is exempted from all requirements under the Act that it bear a certification of inspection if it has been examined, repaired if necessary, and certified to be in safe working condition by a gas fitter.
- (2) A gas fitter or field safety representative may certify by declaration in the required form that a regulated product referred to in subsection (1) has been examined, repaired, and is in safe working condition.

Dealers to maintain records of gas appliances

- 37** A dealer must keep, for a period of at least 7 years, a record respecting every gas appliance that the dealer sells, showing the following:
- (a) the name and address of the purchaser;
 - (b) the place of installation;
 - (c) the type and model number of the appliance.

Division 4 – Inspections

Duty to inform regulatory authority of completion of work for inspection

- 38** (1) On completion of each phase of the gas system authorized by a permit, the holder of the permit or the field safety representative that represents the holder of the permit must immediately inform the regulatory authority that the regulated work has been performed in accordance with the Act and request an inspection.
- (2) After receiving a request under subsection (1), if the regulatory authority does not require an inspection, the holder of the permit or the field safety representative that represents the holder of the permit must make a written declaration in the form provided with the permit that the phase of the regulated work has been completed in accordance with the Act.
- (3) On final completion of the regulated work authorized by a permit, the holder of the permit must immediately complete a notification of completion, installation or alteration form and mail or deliver the completed form to the appropriate regulatory authority.

PART 3 – SAFETY OFFICERS

Safety officer's certificate of qualification

- 39** An application for a gas safety officer's certificate of qualification must, in addition to the requirements in section 2 of the Safety Standards General Regulation,
- (a) be made in writing to a provincial safety manager in the form required by a provincial safety manager,
 - (b) include proof, acceptable to a provincial safety manager, that the applicant has been the holder of a Class B gas fitter's certificate of qualification and employed as a gas fitter for a minimum of five years, and
 - (c) include a statement or statements signed by a person or persons who employed the applicant for a minimum of five years that specifies the knowledge and experience of the applicant and the scope of regulated work done during the period of the applicant's employment.

PART 4 - INCIDENT REPORTING

Reporting incidents to a safety manager

- 40** (1) A safety manager, safety officer or any person performing regulated work who attends any of the following must report it to a provincial safety manager:
- (a) within 24 hours in the case of an explosion, fire or other incident caused by or involving gas;
 - (b) immediately in the case of an incident caused by or involving gas and resulting in injury, death or property damage of a value greater than \$5 000.
- (2) A person who makes a report under subsection (1) must provide any further information required by a provincial safety manager in respect of the matter reported.

PART 5 – TECHNICAL REQUIREMENTS

Division 1 – Requirements and Procedures for Installations and Excavations

Pipe to be above ground where entering building

- 41** Unless exempted from the requirement as a condition of a permit, a person who installs a service pipe must install it so that it rises above ground level before it enters a building or structure.

Connection for pressure gauge to be satisfactory

- 42** If a safety officer requests a suitable connection for a pressure gauge or a pressure recorder, a person who installs a gas installation must supply the pressure gauge or connection.

Tracer wire required for non-metallic gas installations

- 43** A person who installs a gas installation of non-metallic material must attach a copper tracer wire of at least 18 gauge to the non-metallic material.

Procedures for a gas installation in vicinity of underground structures

- 44** (1) A person must not install a gas installation or allow one to be installed so that the gas installation passes through or interferes with any underground structure that is not solely for the use of a gas installation without the written permission of the person responsible for the underground structure.
- (2) A person, unless allowed to do so as a condition of a permit to perform regulated work with respect to gas, must not begin to install or construct an underground structure that will interfere with a gas installation by passing over, under or enclosing the gas installation until an agreement has been entered into with the gas company for the removal or alteration of the gas installation.

Duties of persons intending to construct near gas installation

- 45** A person who intends to construct an underground structure within one metre of a gas installation must notify the gas company operating in the area at least 3 business days before starting the excavation for the structure.

Procedures for excavations

- 46** (1) A person must not excavate or cause any excavating to be done in the vicinity of a gas installation that is or could be in any way damaging or dangerous to a gas installation.
- (2) A person who intends to excavate must, at least 3 business days before the person intends to excavate, request from the gas company serving that area, or its agent, information on the location of all underground gas installations in the vicinity of the proposed excavation.
- (3) A person must not excavate until
- (a) the person ascertains that a request has been made under subsection (2) and
 - (i) the information was provided by the gas company under subsection (5) and that information revealed that there is no gas installation in the vicinity, or
 - (ii) the information was provided by the gas company under subsection (5) and that information revealed that there is a gas installation in the vicinity and that installation has been indicated in accordance with subsection (5), and
 - (b) the person ascertains that information provided by the gas company in respect of the lack of indicators under paragraph (a) (i) or the presence of indicators under paragraph (a) (ii) was supplied by the gas company within 10 days before beginning of the excavation.
- (4) If the excavator is not satisfied under subsection (3) (b), the person must verify the information with the gas company before excavating.
- (5) On receiving a request under subsection (2) a gas company must
- (a) provide the information requested within 3 business days, and
 - (b) indicate the location of gas installations owned or operated by it in the area where the excavation is intended to be made by one or more of the following methods as appropriate for conditions at the excavation site:

- (i) providing a plan or listing of facility locations by measurement from an ascertainable point on the surface;
 - (ii) surface staking;
 - (iii) surface marking.
- (6) Prelocated or marked gas installations must be considered to lie within a zone equal to the diameter of the gas installation plus 0.5 metre on either side of the location indicated by the gas company under subsection (5).
- (7) The indicated location of gas installations must be confirmed by the excavator by means of hand digging and the excavator must expose the gas installations at a sufficient number of locations to determine their exact positions and depths before using mechanized excavation equipment for any purpose other than breaking the surface cover.
- (8) For existing gas installations of non-metallic material not provided with tracer wires, the gas company must, on request, indicate the location, including all changes in direction, of the installation by stakes or paint or both, at intervals not exceeding 100 metres, and subsection (7) applies.
- (9) If an excavator finds that the gas installation is not within the limits described by the gas company,
 - (a) the excavator must so advise the gas company,
 - (b) the gas company must immediately assist in locating and exposing the installation for the excavator, and
 - (c) mechanized excavation must not be carried on in the vicinity until the installation has been located and exposed.
- (10) As the excavation work progresses, the excavator must
 - (a) maintain and keep visible all markings placed by the gas company that identify the location of the gas installation, or
 - (b) if it is impractical to maintain the markings, make other arrangements to ensure that the location of the gas installation is obvious to any observer.

No probing to locate gas installations

- 47** A person must not probe with pointed tools to locate gas installations.

Requirements for blasting in vicinity of gas installation

- 48** (1) A person who intends to blast in the vicinity of a gas installation must
 - (a) comply with sections 44 to 46, and
 - (b) notify the relevant gas company at least 3 business days before blasting.
- (2) If a person has already complied with sections 44 to 46 and discovers in the process of construction that blasting is required, the person must notify the relevant gas company at least 24 hours, counted only on business days, before blasting is to start.

Emergency excavation procedures

- 49** (1) Sections 46 (1) and 44 to 47 do not apply to emergency excavations if there may be an imminent danger to life, health or property.

- (2) A person who excavates under subsection (1) must give notice of the excavation to the relevant gas company operating in that area as soon as practicable.

Procedure for backfilling an excavation when gas installation exposed

- 50** A person who backfills an excavation that has exposed a gas installation must do all of the following:
- (a) take care not to damage the installation, its protective wrapping or any cathodic protection devices;
 - (b) thoroughly tamp the backfill under the gas installation;
 - (c) adequately support the gas installation to the satisfaction of the gas company and ensure that it will remain in its original line and grade during settlement of the backfill;
 - (d) ensure that the backfilling will not diminish lateral support for unexposed parts of the gas installation.

Procedure if gas escapes

- 51** A person who causes damage to a gas installation which results in the escape of gas must immediately take the steps reasonable in the circumstances to do all of the following:
- (a) notify the persons in any premises that may be affected;
 - (b) notify the gas company;
 - (c) warn all persons in any nearby building in which a gas odour is present to evacuate the building;
 - (d) notify a member of the police force having jurisdiction in the place where the installation is located;
 - (e) extinguish all flames and sources of ignition in the vicinity of the installation;
 - (f) notify the nearest fire department;
 - (g) warn traffic, vehicles and pedestrians not to enter the area rendered hazardous by the damage.

Procedure if there is damage to gas installation

- 52** (1) A person who causes damage to a gas installation, whether or not gas is escaping as a result, must immediately notify the relevant gas company of the damage.
- (2) Serious damage reported to a gas company under subsection (1) must promptly be reported by the gas company to a provincial safety manager.

Procedure when gas installation exposed

- 53** A person who exposes more than 3 metres of a gas installation must immediately notify the relevant gas company and securely support the gas installation, to the satisfaction of the gas company, on its original line and grade at intervals of not more than 3 metres.

Procedure if gas fittings exposed

- 54** A person who exposes any bell and spigot joints, mechanical couplings, valves or line insulators must immediately notify the relevant gas company and adequately support the exposed fittings, to the satisfaction of the gas company, such that no strain is placed on the gas installation.

Procedures in respect of cathodic protection devices

- 55** (1) A person working in the vicinity of a gas installation must take all necessary precautions to ensure that no damage is done to insulators, test wires, sacrificial anodes, anode beds, rectifier wires and other cathodic protection devices.
- (2) If damage is done to any cathodic protection device the person who causes the damage must immediately report the damage to the relevant gas company.

Procedure if damage to protective wrapping occurs

- 56** If a person has in any way damaged protective wrapping on a gas installation the person must do all of the following:
- (a) report the damage to the gas company before the damage is repaired;
 - (b) rewrap the gas installation in accordance with the current standards of the gas company;
 - (c) ensure that the rewrapped section is not backfilled until the gas company authorizes the backfilling.

Test charts or reports to be provided on request

- 57** (1) A gas company or gas equipment installer must, on the request of a provincial safety manager, provide copies of test pressure charts or test reports, or both, for any gas installation that the gas company or gas installer is responsible for.
- (2) A gas company must provide a report of the total length of distribution gas line extension installed by the gas company in any calendar year to a provincial safety manager.

Provincial safety manager may require pressure tests

- 58** A provincial safety manager may, at any reasonable time, require that a pressure test of a gas installation be conducted by a gas company in the presence of a safety officer.

Duty of gas company to file construction standards with provincial safety manager

- 59** (1) A gas company must file with a provincial safety manager its standards of construction and any amendments are made to the standards.
- (2) On request of a safety officer, a gas company must make any gas installation plan for which the gas company is responsible available to the safety officer within 24 hours.

Division 2 – Installation and Repair Procedures for Appliances and Gas Systems

Turning gas supply on and off

- 60** (1) A person must not turn off a gas supply unless the person notifies all affected consumers.
- (2) If a gas supply has been turned off, a person must not turn the supply on again until the person
- (a) notifies all affected consumers, and
 - (b) carefully checks all outlets and pilots to ascertain that they are relighted or turned off.

Unrepairable appliance

- 61** (1) A person who finds any appliance or gas equipment beyond repair or in an unsafe condition must
- (a) place the appliance or gas equipment out of service, and
 - (b) promptly notify a safety officer of its condition and location.
- (2) If the initial notification under subsection (1) (b) is verbal, it must be promptly confirmed by a written statement setting out the facts.

Duties of owner of rental premises concerning gas appliances

- 62** The owner of rental premises must
- (a) post a notice, of a permanent nature, respecting the safe operation of an appliance, on the premises in a conspicuous location where it can be seen by any person using the appliance,
 - (b) ensure that appliances on the rental premises are maintained in a safe condition, and
 - (c) maintain accurate records of maintenance and servicing performed on the gas system on the rental premises.

Gas fitter's tag to be affixed on completion of work

- 63** When a gas system installation has been completed, a gas fitter must affix a tag, bearing the gas fitter's name, certificate of qualification number, type of appliance and date of affixation,
- (a) if there is a building, to a pipe of that gas system at the point of entry into the building or at the point where the gas pipe enters the appliance, or
 - (b) if there is no building, at the gas meter or at the point where the gas pipe enters the appliance.

Adjustments on connection to gas line

- 64** A person who connects gas to an appliance must do all of the following:
- (a) adjust and test each appliance the person connects so that it will operate in accordance with the manufacturer's specifications;
 - (b) adjust the input rate to the required rate by
 - (i) replacing a fixed orifice size,
 - (ii) changing the adjustment of an adjustable orifice, or
 - (iii) if a regulator is provided, by readjusting the gas pressure regulator outlet;
 - (c) ensure that the appliance vents in a safe and proper manner.

Testing after disconnection

- 65** If a person disconnects the outlet of a service meter from the house piping the person must
- (a) remake the joint at the service meter outlet, and
 - (b) turn the service meter on again only after testing the house piping and ensuring that no other outlets are open.

Notice to gas company if input greater than 45 kW

- 66 (1) A person must not install an appliance or cause an appliance to be installed on a gas system without first giving notice to the gas company that supplies that gas if
- (a) the installation of the appliance will increase the total connected hourly input ratings of the appliances served by a service meter to greater than 45 kW, or
 - (b) the total connected hourly input rating of the appliances served by a service meter is greater than 45 kW.
- (2) A notice under subsection (1) must state the type and input rating of the appliance and the address of the premises in which the appliance is to be installed.
- (3) This section does not apply to
- (a) a vehicle gas system, or
 - (b) gas equipment at a propane bulk plant.

Odorization

- 67 (1) All gas that does not naturally possess a distinctive odour so that its presence in the atmosphere is readily detectable at all gas concentrations equal to or higher than 1/5 of the lower explosive limit must have an odorant added to make it so detectable.
- (2) Subsection (1) does not apply to gas delivered for further processing or for use if the odorant would serve no useful purpose as a warning agent.

Propane containers to be filled correctly

- 68 When filling propane containers, a person must
- (a) ensure that the propane containers are not over filled, and
 - (b) ensure that the propane containers have been filled in accordance with the adopted code.

SCHEDULE – VARIATIONS FOR B.C. NATURAL GAS AND PROPANE CODE TO THE NATIONAL CODE

1 *Paragraph (b) of Clause 3.14.6 of CAN/CGA-B149.1-00, the Natural Gas and Propane Installation Code, is repealed and the following substituted:*

- (b) the clearance between the **appliance** and the edge of the roof or other hazard shall be at least 6 feet (2 m), but this clearance may be reduced to 3 feet (1 m) if a permanent guard rail or equivalent protection is provided; and

2 *The following clause is added after Clause 3.14.7 of CSA-B149-00:*

- 3.14.8** When it is considered necessary to install an **appliance** within screening or within a roof well (a depressed area on a roof), the following additional requirements apply:
- (a) screening shall have a free opening of not less than 50% of the area of each side;

- (b) there shall be no roof, cover or screens over the well **enclosure**;
- (c) each **appliance** shall be installed with not less than
 - (i) 36 inches (90 cm) clearance from any side of the **appliance**, or
 - (ii) the clearance required by the manufacturer of the **appliance**,
 whichever is greater;
- (d) **vent** terminations with respect to the walls of a screen or roof well shall
 - (i) be no higher than the height of the **appliance** when it is vented atmospherically, or
 - (ii) not exceed an angle of 45 degrees from the vent outlet of a power or fan assisted **venting system**;
- (e) when an **appliance** is installed with screening consisting of two solid walls or is installed in a roof well, fresh air shall not be taken from within the enclosure unless a 20 foot (6 m) separation can be maintained between the **vent** outlet and the fresh air inlet;
- (f) an **appliance** installed outdoors in an area which is subject to an ambient temperature lower than -40°F (-40°C) shall be **approved** by a recognized testing agency for -60°F (-51.1°C), or be an **appliance approved** for operation to -40°F (- 40°C) and equipped with a low ambient switch.

3 *The following clauses are added after Clause 5.15.14 of CSA-B149.1-00:*

- 5.15.15 A piping system laid underground shall be cathodically protected regardless of pressure. The only exceptions are construction camps (where the system may be used for a limited time), nonmetallic pipe and copper pipe or tube.
- 5.15.16 To ensure electrical continuity when a mechanical **fitting** is used, each **fitting** shall be bonded over by No. 6TW cable attached to the piping by either
- (a) cadwelding; or
 - (b) brazing.
- 5.15.17 Cathodically protected underground piping shall be buried not less than 12 inches (300 mm) horizontally from all other underground pipes or conduits, except by special permission.
- 5.15.18 Where an underground gas pipe crosses another underground pipe or conduit, a minimum clearance of 2 inches (50 mm) shall be provided either above or below the gas line in accordance with the requirements of Section 5.15.
- 5.15.19 All piping in the protected system shall be electrically insulated from all other piping by means of suitable electrical insulating **fittings**. Anodes shall be magnesium.

4 *The following clauses are added after Clause 6.18.6 of CSA-B149.1-00:*

- (c) The instructions to the lessee by the lessor shall include, but not be restricted to, the following:
 - (a) replacement of tanks and cylinders;
 - (b) operation of the **construction heater**;

- (c) specific tools to be used;
 - (d) clearances required from **combustible** materials;
 - (e) shutting off the **construction heater**;
 - (f) checking for leaks;
 - (g) moving the **construction heater** from location to location.
- (d) Maintenance of the construction heater must be performed by the lessor. This work shall include the regulator, hose and fittings.

5 *The following section is added after clause 6.18.9 of CSA-b149.1-00:*

6.18.10 A piping permit is required for the laying of temporary gas piping to connect a **construction heater**. This work shall be done by a qualified gas fitter.

6 *Clause 6.23.4 of CSA-b149.00 is repealed.*

7 *The following section is added after Clause 6.23.5 of CSA-149.1-00:*

6.23A Gas Appliances Installed in Bedrooms and Bathrooms

6.23A.1 A gas appliance installed in a bathroom with a door shall be of the direct vent type only.

6.23A.2 A gas appliance installed in a closet or a small room having access only through a bathroom, bedroom or bed-sitting room shall be of the direct vent type or have combustion and ventilation air supplied to the closet or small room. If any exhaust fan affects the operation of a gas appliance, the gas appliance shall be isolated from the bathroom using a sealed opening or door closer.

6.23A.3 A gas **appliance** installed in a bedroom shall meet all of the following requirements:

- (a) the **appliance** must be of the automatic temperature controlled type;
- (b) the **appliance** must be equipped with a **pressure regulator**;
- (c) the **appliance** must have a 100% safety shut-off control valve;
- (d) the **appliance** must be vented and meet the requirements for combustion air specified by the Gas Safety Branch.

6.23A.4 A gas **appliance (fireplace)** installed as a divider between a **bedroom** and **bathroom** shall meet all the requirements for an installation in a **bedroom**. In addition, the gas **appliance** shall be sealed from the **bathroom** using material that is impact resistant and thermal shock proof. Clearance to the tub must be maintained to prevent accidental injury from the hot surface of the **appliance**.

8 *Clause 7.3.6 of CSA-B149.1-00 is repealed and the following substituted:*

7.3.6 An **air supply** inlet opening from the outdoors shall

- (a) have a minimum vertical distance of 24 inches (600 mm) between the bottom of the intake grill and the finished grade at the point of intake in order to prevent obstruction of the combustion air intake by snow or other material, and

- (b) not be taken from a car port.

9 *The following clause is added after Clause 7.8.2 of CSA-149.1-00:*

- 7.8.3** When the **air supply** is provided by mechanical means from the outdoors for **natural draft**, partial fan assisted, fan assisted or power **draft** assisted burners, the air quantity supplied by the fan shall be based on 30 cubic feet (0.85 cubic meters) of outside air for each 1 000 BTU/hour of gas supplied to the burners.

10 *The following section is added after Clause 7.14.12 of CSA-B149.1-00:*

7.14A Direct Vent Fireplace Vents

- 7.14A.1** A direct vent fireplace terminal location shall not be installed in any area which is not allocated to the occupancy in which the fireplace is installed.

7.14A.2 In a structure with three walls and a roof, the terminal shall not be installed

- (a) more than 72 inches (183 cm) from the outside opening,
- (b) on any wall that has an opening between the terminal and the open side of the **structure**,
- (c) below 84 inches (218 cm) from a deck, patio or balcony without a **certified** guard.,

7.14A.3 A direct vent **fireplace** shall not be installed

- (a) below a ceiling or soffit that has perforations (openings) unless the ceiling or soffit is sealed for a distance of 24 inches (61 cm) on either side of the centre line of the vent termination,
- (b) less than 6 feet (183 cm) under a window that opens on a horizontal plane, or
- (c) directly under a balcony or deck constructed such that there are openings in the deck surface.