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Power Engineers Regulations
made under Section 49 of the
Technical Safety Act
S.N.S. 2008, c. 10
O.I.C. 2011-29 (January 18, 2011, effective April 1, 2011), N.S. Reg. 12/2011

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Interpretation and Application

Citation

- 1 These regulations may be cited as the *Power Engineers Regulations*.

Definitions

- 2 (1) In these regulations,

“Act” means the *Technical Safety Act*;

“apprentice” means an apprentice registered under the *Apprenticeship and Trades Qualifications Act* and enrolled in a program under that Act to qualify for a PE certificate of qualification;

“assistant shift plant operator” of a regulated plant means a plant operator or power engineer who holds a class of PE licence that is at least equivalent to 1 class lower than the licence required for the regulated plant’s shift plant operator and who, under the supervision of a shift plant operator or shift power engineer, operates or is responsible for a section of a refrigeration plant or compressor plant;

“assistant shift power engineer” of a regulated plant means a power engineer who holds a class of PE licence that is at least equivalent to 1 class lower than the licence required for the regulated plant’s shift power engineer and who, under the supervision of a shift power engineer, operates or is responsible for a section of a plant;

“automatic control” means a device that starts, stops and modulates the operations of a plant without the intervention of a person;

“boiler plant” means a single boiler or multiple boilers with a common distribution system that are considered to be 1 plant under Section 10, and includes a fired power boiler plant, an unfired power boiler plant or a heating boiler plant;

“Canadian Association of Chief Inspectors” or “ACI” means the association of chief inspectors for boilers and pressure vessels or equipment that acts as a technical committee for the Canadian Standards Association and is responsible for reviewing and making recommendations on standards, products or procedures for regulated products, regulated plants and regulated work;

“chief plant operator” means a plant operator or a power engineer who has charge of

and responsibility for the operation of a refrigeration plant or compressor plant and is designated as the chief plant operator of the plant in accordance with Section 28, and includes a chief plant operator designated on a temporary basis under Section 29;

“chief power engineer” means a power engineer who has charge of and responsibility for the operation of a regulated plant and is designated as the chief power engineer of the plant in accordance with Section 28, and includes a chief power engineer designated on a temporary basis under Section 29;

“coiled-tube boiler” means a boiler that is

- (i) equipped with 1 or more coils or tubes with forced water circulation submitted to flame action, and
- (ii) not equipped with a storage tank;

“compressor plant” means an installation consisting of any type of compressor, pressure vessels, pipes, fittings, machinery or other equipment used for compressing and storing air or other gas under pressure;

“continuous supervision”, in relation to a regulated plant, means that the plant is supervised by a power engineer or plant operator located in each of the following locations:

- (i) in the plant and within the audible and visual range of the alarm system for the plant,
- (ii) in the primary control area of the plant, where the person can manually control the plant by starting, stopping, restarting or modulating the operations of the plant;

“direct supervision”, in relation to a trainee at a regulated plant, means that the trainee is supervised by a power engineer or plant operator who

- (i) is physically in the plant,
- (ii) has control over the trainee’s activities,
- (iii) instructs and directs the trainee, and
- (iv) is in direct communication with the trainee whenever the trainee is performing the duties of a power engineer or plant operator;

“expansible fluid” means either of the following:

- (i) a vapour or gaseous substance,
- (ii) a substance that is a liquid under its current pressure and temperature but that will change to a gas or vapour when the pressure is reduced to

atmospheric pressure;

“extended alarm system” means an alarm system that meets all of the following criteria:

- (i) it extends beyond the room that houses the plant,
- (ii) it audibly and visually warns the power engineer, plant operator and any person in the vicinity of the plant that there is an abnormal operating condition at the plant,
- (iii) it cannot be shut off until any abnormal condition warned of is rectified or the plant is shut down;

“fired”, in relation to a boiler, means that the boiler contents are heated by electricity or the product of combustion of a fuel;

“Group A1” or “A1”, in relation to refrigerants, means the Group A1 class of refrigerant as defined and classified in the PE standards;

“Group A2” or “A2”, in relation to refrigerants, means the Group A2 class of refrigerant as defined and classified in the PE standards;

“Group A3” or “A3”, in relation to refrigerants, means the Group A3 class of refrigerant as defined and classified in the PE standards;

“Group B1” or “B1”, in relation to refrigerants, means the Group B1 class of refrigerant as defined and classified in the PE standards;

“Group B2” or “B2”, in relation to refrigerants, means the Group B2 class of refrigerant as defined and classified in the PE standards;

“Group B3” or “B3”, in relation to refrigerants, means the Group B3 class of refrigerant as defined and classified in the PE standards;

“guarded”, in relation to a regulated plant, means that the plant meets all of the following criteria:

- (i) it functions automatically under automatic controls and with safety devices that limit the operation of the plant to preset safety parameters,
- (ii) it is equipped and maintained in accordance with the requirements for guarded plants in Sections 21 to 26, or as otherwise required under these regulations;

“heating boiler” means a fired steam boiler or a fired high-temperature hot-water boiler;

“indirect system” means a system with a secondary coolant that is cooled or heated by

a refrigeration system and circulated to the air or other substance to be cooled or heated;

“interprovincial certificate of qualification” means a category of PE certificate of qualification granted by the PE chief inspector to an individual who has successfully completed the examinations prepared by the Standardization of Power Engineers Examinations Committee (SOPEEC) established by the Canadian Association of Chief Inspectors, in recognition of the individual’s qualifications to perform the category of regulated work covered under the class of the PE certificate of qualification as recognized by these regulations;

“logbook” means either of the following used for keeping a record of plant operations and maintenance:

- (i) a bound book with numbered pages,
- (ii) a record kept in an electronic format approved by the PE chief inspector;

“minimum supervision”, in relation to a regulated plant, means that the plant is supervised by a power engineer or plant operator who manually starts the plant when the plant is not operating under automatic control;

“PE certificate of qualification” means a certificate of competency in the form of an interprovincial certificate of qualification or a Provincial certificate of qualification;

“PE chief inspector” means the inspector designated as chief inspector for the purposes of the Act and these regulations;

“PE fees” means the fees for power engineer services set by the Minister in the *Technical Safety Fees Regulations* made under the Act;

“PE inspector” means an inspector designated for the purposes of the Act and these regulations;

“PE licence” means a licence for undertaking regulated work under Section 23 of the Act that is granted to an individual by the PE chief inspector to authorize the individual to operate a regulated plant or perform the category of regulated work covered by the class of the licence as specified in the licence;

“PE standards” means the standards for power engineers or plant operators established or adopted by the Minister in the *Technical Safety Standards Regulations* made under the Act;

“periodic supervision”, in relation to a regulated plant, means that the plant is supervised by a power engineer or plant operator who

- (i) is located on the plant site within range of the extended alarm system for the regulated plant whenever the plant is being operated and any building containing or serviced by the plant is occupied, and

- (ii) starts the plant manually whenever the regulated plant is not operated under automatic control;

“plant operator” means an individual who holds a PE licence under these regulations that is of a class of licence that authorizes them to perform the work or duties of a plant operator in a position specified for a class of plant as set out in Sections 43 to 54;

“plant registration certificate” means a certificate issued by the PE chief inspector to the owner of a regulated plant that displays all of the following as determined in accordance with these regulations:

- (i) the plant’s classification under these regulations,
- (ii) the plant’s TPPR,
- (iii) the supervision required for the plant,
- (iv) the class of PE licence that must be held by the chief power engineer or chief plant operator and the shift power engineer or shift plant operator of the regulated plant;

“plant site” means the regulated plant and the property on which the plant is situated that is leased or owned by the owner, but does not include property that is separated by a public access route;

“power boiler” means a fired or unfired steam boiler;

“power engineer” means an individual who holds a PE licence under these regulations that is of a class of licence that authorizes them to perform the work or duties of a power engineer or plant operator in a position specified for a class of plant as set out in Sections 43 to 54;

“power rating” means the power rating of a regulated product measured in kilowatts (kW), as determined under Section 9;

“pressure” means pressure in kilopascals (kPag) or pounds per square inch (psig) as measured by a pressure gauge directly connected to the equipment that contains the pressurized material the gauge is measuring the pressure of;

“pressure vessel” means a vessel or other apparatus, other than a boiler, that is or may be used for containing, storing, distributing, transferring, distilling, processing or otherwise handling gas, air or liquid at a pressure of higher than 103 kPag (15 psig) and that has the following measurements:

- (i) a diameter of larger than 152 mm (6 in.),
- (ii) a capacity of greater than 42.5 L (1.5 cu. ft.);

“Provincial certificate of qualification” means a category of PE certificate of qualification granted to an individual by the PE chief inspector in recognition of the individual’s qualifications to conduct the category of regulated work covered by the class of PE certificate of qualification as specified in these regulations;

“reduced supervision”, in relation to a regulated plant, means a level of reduced supervision authorized under Section 16;

“regulated plant” means a plant prescribed in Section 3;

“self-contained system” means a system that meets all of the following criteria:

- (i) it is completely factory made and tested,
- (ii) it is fully framed or enclosed,
- (iii) it is fabricated and shipped in 1 or more sections,
- (iv) any parts of it that contain refrigerant are not connected in the field other than by companion or block valves;

“shift plant operator” of a regulated plant means a plant operator or power engineer who has charge of and operates the plant under the direction and supervision of a chief plant operator or chief power engineer and who holds of a class of PE licence at least equivalent to 1 class lower than the class of PE licence required for the chief plant operator or chief power engineer of the plant;

“shift power engineer” of a regulated plant means a power engineer who has charge of and operates the plant under the direction and supervision of a chief power engineer [and] who holds of a class of PE licence at least equivalent to 1 class lower than the class of PE licence required for the chief power engineer of the plant;

“supervision”, in relation to an individual in a regulated plant other than a trainee, means that the individual is supervised by a power engineer or plant operator at the plant who

- (i) instructs and directs the individual,
- (ii) is responsible for the individual’s actions at the plant, and
- (iii) provides assistance and support to the individual;

“TPPR” of a regulated plant means the total plant power rating of the plant measured in kilowatts (kW), as determined under Section 10;

“trainee” means an individual, including an apprentice, who

- (i) is in a training program and actively pursuing an initial class of PE certificate of qualification, or

- (ii) is performing regulated work at a regulated plant but does not hold the minimum class of PE certificate of qualification required to apply for a PE licence to perform that category of regulated work at the plant;

“unfired”, in relation to a boiler, means that steam is generated in the boiler without the combustion of a fuel or the direct application of an electrical heat source;

“unsupervised plant”, in relation to a regulated plant, means a plant that may be operated without a power engineer or plant operator, in accordance with Sections 16 and 20.

- (2) A term defined in Section 3 [2] of the *Technical Safety General Regulations* made under the Act has the same meaning when used in these regulations.

Plants prescribed (regulated plants)

3 All of the following are prescribed as plants under the Act:

- (a) all of the following boiler plants:
 - (i) a fired power boiler plant that meets all of the following criteria:
 - (A) it is equipped with a safety valve designed to operate at pressures of higher than 103 kPag (15 psig),
 - (B) it has a TPPR of higher than 500 kW,
 - (ii) a fired power boiler plant that has a high-pressure coiled-tube boiler and that meets all of the following criteria:
 - (A) it has a water volume of greater than 284 L,
 - (B) it has a TPPR of higher than 500 kW,
 - (iii) a fired power boiler plant that has a low-pressure coiled-tube boiler and that meets all of the following criteria:
 - (A) it has a water volume of greater than 568 L,
 - (B) has a TPPR of higher 3500 kW,
 - (iv) an unfired power boiler plant that meets all of the following criteria:
 - (A) it is equipped with a safety valve designed to operate at pressures of higher than 103 kPag (15 psig),
 - (B) has a TPPR of higher than 3500 kW,
 - (v) a heating boiler plant that has a TPPR of higher than 1500 kW and that

meets either of the following criteria:

- (A) it has a fired steam boiler that is equipped with a safety valve designed to operate at pressures of 103 kPag (15 psig) or lower,
- (B) it has a fired high-temperature hot-water boiler designed to operate at pressures of higher than 1100 kPag (160 psig) or has a water temperature at any boiler outlet of higher than 121 °C (250 °F);

(b) all of the following refrigeration plants:

- (i) a refrigeration plant that uses a Group A1 or B1 refrigerant and meets either of the following criteria:
 - (A) it is in a public assembly, institutional or residential occupancy, as defined in the PE standards, and has a TPPR of higher than 75 kW,
 - (B) it is in it a commercial or industrial occupancy, as defined in the PE standards, and has a TPPR of higher than 150 kW,
- (ii) a refrigeration plant that uses a Group A2, A3, B2 or B3 refrigerant and has a TPPR of higher than 37.5 kW;

(c) all of the following compressor plants:

- (i) a compressor plant that compresses air or a non-flammable or non-toxic gas, other than oxygen, uses any type of compressor and has a TPPR of higher than 350 kW,
- (ii) a compressor plant that compresses a flammable or toxic gas or oxygen, uses any type of compressor and has a TPPR of higher than 37.5 kW.

Regulated products prescribed

4 Except as provided in Section 5, all of the following are prescribed as regulated products under the Act and these regulations:

- (a) a regulated plant;
- (b) any part or section of a regulated plant.

Products exempt from Act and regulations

5 All of the following products are exempt under subsection 6(2) of the Act from the Act and these regulations:

- (a) a railway operating subject to a federal or Provincial enactment;
- (b) a centrifugal blower ~~used in~~ when air or other non-flammable or non-toxic gas is not stored under pressure;

- (c) a plant on a vessel that is subject to the *Canada Shipping Act* (Canada).

Regulated work prescribed

- 6** Except as provided in Section 7, all of the following are prescribed as regulated work under the Act and these regulations:
- (a) work or duties of a power engineer;
 - (b) work or duties of a plant operator.

Work exempted from Act and regulations

- 7** All of the following work is exempt under subsection 6(2) of the Act from the Act and these regulations:
- (a) work by a person engaged in installing, setting up or testing a regulated plant or equipment before the regulated plant is registered;
 - (b) work by a person setting up or testing equipment that is part of a regulated plant when under the supervision of a power engineer or plant operator.

Recognized certification organizations prescribed

- 8** A certification organization recognized or accredited by the Standards Council of Canada is prescribed as a recognized certification organization under the Act and these regulations for the purposes that the certification organization is recognized or accredited by the Standards Council of Canada.

Rating of Plant Equipment

Power ratings

- 9** (1) The power ratings of the components of a regulated plant must be determined by the PE chief inspector in accordance with this Section.
- (2) Except as provided in subsection (3), the power rating for a boiler must be determined by the following formula:
- $$\text{MHO} \div 3412$$
- in which MHO is the maximum heat output of the boiler as specified by the boiler manufacturer and measured in British Thermal Units per hour.
- (3) If the maximum heat input or output of the boiler is unavailable, the PE chief inspector may determine the power rating by any of the following methods:
- (a) by the following formula:

$$\text{BHP} \times 9.81$$

in which BHP is the boiler's horsepower calculated by the manufacturer;

- (b) if electric power is used as a heat source, by determining the maximum aggregate capacity of all heating elements;
 - (c) by measuring the maximum steam flow of the boiler.
- (4) The power rating for a refrigeration compressor, air compressor or gas compressor must be the power rating of the electric motor or prime mover driving the compressor.
- (5) The power rating for an electric motor or prime mover used in a regulated plant must be the maximum power specified by the manufacturer that can be delivered at the drive shaft during continuous operation.

Calculating TPPR

- 10 (1) The TPPR for a regulated plant must be determined by the PE chief inspector in accordance with this Section and the power ratings determined under Section 9.
- (2) Subject to subsections (3) and (4), a boiler, refrigeration compressor, air compressor or gas compressor that share a common distribution system are considered a single plant and must have their respective power ratings added together to determine the TPPR for the regulated plant.
- (3) The power ratings for unfired boilers at a regulated plant must be added together and must be separate from the power ratings for fired boilers at the plant when determining the TPPR for the plant.
- (4) The power ratings for refrigeration systems that share an evaporator or condenser must be added together to determine the TPPR for the plant.
- (5) An owner of a regulated plant may apply to the PE chief inspector to have the TPPR of a plant reduced if non-operating equipment at the plant is sealed in accordance with Section 14.

Regulated Plants

Regulated plant classes

- 11 The PE chief inspector must classify a regulated plant in accordance with the following table of prescribed classes:

Prescribed Class	Type of Plant	Total Plant Power Rating
Boiler Plants:		
First Class	fired power boiler plant	over 20 000 kW
Second Class	fired power boiler plant	over 10 000 kW to 20 000 kW
Third Class	fired power boiler plant	over 3500 kW to 10 000 kW
	unfired power boiler plant	over 3500 kW

	heating boiler plant	over 10 000 kW
Fourth Class	fired power boiler plant	over 500 kW to 3500 kW
	heating boiler plant	over 1500 kW to 10 000 kW
Refrigeration plants:		
First Class	refrigeration plant that uses a Group A1 or B1 refrigerant	over 1000 kW
	refrigeration plant that uses a Group A2, A3, B2, or B3 refrigerant	over 450 kW
Second Class	refrigeration plant that uses a Group A1 or B1 refrigerant	1000 kW or lower
	refrigeration plant that uses a Group A2, A3, B2, or B3 refrigerant	450 kW or lower
Compressor plants:		
Compressor plant	compressor plant that compresses air or a non-flammable or non-toxic gas, except oxygen, and uses any type of compressor	over 350 kW
	compressor plant that compresses oxygen or a flammable or toxic gas and uses any type of compressor	over 37.5 kW

Regulated plant registration

- 12 (1)** An owner of a regulated plant must ensure that the applicable PE fees are paid and that all of the following requirements are met before the plant begins operating and while the plant is operating:
- (a) the plant is registered with the PE chief inspector in the appropriate class;
 - (b) the plant registration certificate for the plant is displayed at the plant site at all times;
 - (c) the plant is in compliance with all requirements for its registration and operation.
- (2)** An owner of a regulated plant may apply to register, re-classify or re-register the plant by submitting a completed registration form, together with all of the following:
- (a) payment of the applicable PE fees;
 - (b) enough information about the plant to enable it to be correctly classified;

- (c) any information on the operation of the plant requested by the PE chief inspector.
- (3) A plant registration certificate is valid until the earliest of all of the following dates:
- (a) the expiry date specified on the certificate;
 - (b) except as provided in subsection (5) for the addition of a portable boiler, the date there is a change in a condition under which the regulated plant operates, whether or not the change results in a change in plant classification, that differs from the conditions under which the plant was registered as displayed on the certificate;
 - (c) the date the ownership of the regulated plant changes;
 - (d) except as provided in subsection 17(2), the date there is a change in the level of supervision at the plant.
- (4) A plant registration certificate does not expire on the date that a portable boiler is put into service at a regulated plant if all of the following conditions are met:
- (a) the portable boiler is registered under the *Boiler and Pressure Equipment Regulations* made under the Act;
 - (b) the addition of the portable boiler does not increase the TPPR for the plant to higher than the TPPR specified on the plant's plant registration certificate.
- (5) The PE chief inspector may issue a temporary plant registration certificate that is valid for less than a year if the conditions for the temporary plant registration are met and the applicable PE fees are paid.

Change of ownership

13 The owner or seller of a regulated plant must notify the PE chief inspector as soon as possible and before the plant is operating under the new owner if the ownership of the plant changes and must provide details on the identity and contact information for the new owner.

Sealing of equipment at a regulated plant

- 14 (1)** If equipment at a regulated plant is not being operated, the PE chief inspector may seal the equipment that is no longer part of the plant and do any of the following:
- (a) re-classify the plant;
 - (b) reduce the TPPR of the plant;
 - (c) reduce the level of supervision required for the plant.
- (2) A person must not use or operate, or cause or permit to be used or operated any equipment sealed under subsection (1).

- (3) If the PE chief inspector takes any action under clauses (1)(a) to (c), the owner of the regulated plant must re-register the plant under subsection 12(2), and the PE chief inspector must issue a new plant registration certificate to replace the plant registration certificate made invalid by the change to the plant.

Supervision of Regulated Plants

Level of supervision required

- 15** (1) An owner of a regulated plant must provide continuous supervision of the plant unless the PE chief inspector authorizes reduced supervision under Section 16.
- (2) An owner or person in charge of a regulated plant, other than a regulated plant that is authorized under Section 16 to operate as an unsupervised plant, must not operate the plant or permit the plant to be operated unless it is operated in accordance with all of the following:
- (a) it is operated under the supervision of a power engineer or a plant operator who holds a class of PE licence that qualifies them to act as the chief power engineer or chief plant operator of the plant;
 - (b) it is operated under the level of supervision authorized under these regulations for the regulated plant and in accordance with the requirements for the level of supervision.
- (3) The PE chief inspector may direct an owner of a regulated plant to employ additional power engineers or plant operators with the required class of PE licence if the PE chief inspector is satisfied that
- (a) the number of power engineers or plant operators employed by the owner is not enough to safely operate the plant;
 - (b) the power engineers or plant operators employed by the owner do not hold the required class of PE licence.
- (4) If the PE chief inspector is not satisfied that one of the levels of supervision under these regulations is appropriate to safely operate a boiler, refrigeration or compressor plant, the PE chief inspector may direct the owner to follow additional supervision requirements for the plant above those usually required for the level of supervision.

Authorization for reduced supervision

- 16** (1) An owner of a regulated plant may apply to the PE chief inspector for authorization to operate the plant under less than continuous supervision and operate the plant at 1 of the following reduced levels of supervision:
- (a) periodic supervision;
 - (b) minimum supervision;
 - (c) unsupervised.

- (2) The PE chief inspector may authorize a reduced level of supervision for a regulated plant if the plant meets all of the following criteria:
 - (a) the plant is guarded and meets all the requirements for a guarded plant, including being equipped with an extended alarm system;
 - (b) the plant meets the requirements for the level of reduced supervision in
 - (i) Section 18 for periodic supervision,
 - (ii) Section 19 for minimum supervision,
 - (iii) Section 20 for an unsupervised plant.
- (3) The PE chief inspector may authorize a reduced level of supervision for a regulated plant or change the level of supervision authorized for a regulated plant that is already authorized to operate under reduced supervision on a temporary basis if the conditions set out in subsection (2) are met.
- (4) An owner of a regulated plant must not operate the plant or permit the plant to be operated under a reduced level of supervision unless all of the following conditions are met:
 - (a) the plant is authorized to operate at the reduced level of supervision under this Section;
 - (b) the plant continues to meet the conditions set out in subsection (2) and any additional requirements directed for the plant under subsection 15(4).

Loss of reduced supervision status

- 17 (1)** An owner of a regulated plant that is authorized to operate at a reduced level of supervision under Section 16 must immediately change the level of supervision for the plant to continuous supervision if any of the following occurs:
- (a) the extended alarm system or one of the required control, alarm and safety devices and systems is inoperative or ineffective;
 - (b) the plant no longer meets the conditions in subsection 16(4);
 - (c) the PE chief inspector is not satisfied that the reduced level of supervision is appropriate to safely operate the plant and suspends or revokes the authorization to operate at a reduced level of supervision.
- (2) If the level of supervision for a regulated plant is changed under subsection (1) and is required to stay changed for longer than 14 days, the owner of the plant must apply to the PE chief inspector for a new plant registration certificate.

Periodic supervision

- 18 (1)** Only the following types of regulated plants may be operated under periodic

supervision:

- (a) a fourth class fired power boiler plant;
 - (b) a fourth class heating boiler plant;
 - (c) a first or second class refrigeration plant that uses a Group A2, A3, B2 or B3 refrigerant and meets the following criteria:
 - (i) for a plant whose primary occupancy is a commercial or industrial occupancy,
 - (A) the plant has capacity control, failure detection and controller systems, and
 - (B) the plant has a TPPR of 1000 kW or lower, or an indirect system;
 - (ii) for a plant whose primary occupancy is a public assembly, institutional or residential occupancy,
 - (A) the plant has a TPPR of 450 kW or lower, or
 - (B) the plant has an indirect system with a TPPR of 1000 kW or lower;
 - (d) a first or second class refrigeration plant that uses a Group A1 or B1 refrigerant;
 - (e) a compressor plant that has a TPPR of 350 kW or lower that compresses oxygen or a flammable or toxic gas;
 - (f) a compressor plant that has any TPPR that compresses air or non-flammable or non-toxic gas.
- (2) A power engineer or plant operator of a regulated plant that is operating under periodic supervision must not leave the plant site without ensuring all of the following:
- (a) that the plant is operating under automatic control safely and in accordance with the manufacturer's specifications;
 - (b) that the plant is guarded;
 - (c) that any building containing or serviced by the plant is unoccupied.
- (3) A power engineer or plant operator for a regulated plant that is operating under periodic supervision must visit the plant at least once in every 12-hour period that the plant is unoccupied, to ensure all of the following:
- (a) that the plant remains guarded;
 - (b) that the plant is operating safely and in accordance with the manufacturer's

specifications.

Minimum supervision

19 (1) Only the following types of regulated plants may be operated under minimum supervision:

- (a) a fourth class fired power boiler plant that has a TPPR of 1000 kW or lower;
- (b) a fourth class heating boiler plant that has a TPPR of 2000 kW or lower;
- (c) an unfired power boiler plant of any class that meets the guarded control requirements for a guarded plant specified by the PE chief inspector;
- (d) a refrigeration plant whose primary occupancy is a commercial or industrial occupancy that meets the following criteria:
 - (i) it is a first or second class refrigeration plant that
 - (A) uses a Group A2, A3, B2 or B3 refrigerant,
 - (B) has a TPPR of 450 kW or lower, or an indirect system with a TPPR of 1000 kW or lower, and
 - (C) has capacity control, failure detection and controller systems,
 - (ii) it is a second class refrigeration plant that
 - (A) uses a Group A1 or B1 refrigerant,
 - (B) has a TPPR of 1000 kW or lower, and
 - (C) has capacity control, failure detection and controller systems;
- (e) a refrigeration plant whose primary occupancy is a public assembly, institutional or residential occupancy that meets the following criteria:
 - (i) it is a second class refrigeration plant that
 - (A) uses a Group A2, A3, B2 or B3 refrigerant, and
 - (B) has a TPPR of 150 kW or lower, or an indirect system with a TPPR of 450 kW or lower;
 - (ii) it is a second class refrigeration plant that
 - (A) uses a Group A1 or B1 refrigerant, and
 - (B) has a TPPR of 450 kW or lower, or an indirect system;

- (f) a compressor plant that compresses oxygen or a flammable or toxic gas and has a TPPR of 150 kW or lower;
 - (g) a compressor plant that compresses air or a non-flammable or non-toxic gas and has a TPPR of 750 kW or lower.
- (2) A power engineer or plant operator of a regulated plant that is operating under minimum supervision must not leave the plant site without ensuring all of the following:
- (a) that the plant is operated under automatic control safely and in accordance with the manufacturer's specifications;
 - (b) that the plant is guarded.
- (3) A power engineer or plant operator for a regulated plant that is operating under minimum supervision must visit the plant at least once in every 24-hour period that the plant is unoccupied, to ensure that the plant remains guarded.

Unsupervised plant

- 20 (1)** Only a second class refrigeration plant that meets all of the following specifications may be operated as an unsupervised plant:
- (a) the plant has a self-contained system installed in accordance with the applicable PE standards and has a TPPR of 350 kW or lower;
 - (b) the plant is made up of centrifugal chillers that
 - (i) are used for air conditioning for the comfort of inhabitants and cool the air by circulating chilled water only, and
 - (ii) use a Group A1 or B1 refrigerant;
 - (c) the plant operates at a pressure of lower than 103 kPa (15 psig);
 - (d) the plant is a self-contained unit that is located either outside or on a rooftop and uses a Group A1 or B1 refrigerant.
- (2) An unsupervised plant must be operated in accordance with all of the following:
- (a) a maintenance procedure acceptable to the PE chief inspector;
 - (b) the manufacturer's specifications;
 - (c) the applicable PE standards.
- (3) An owner of a regulated plant that is operated as an unsupervised plant must provide the name of any maintenance contractor for the plant to the PE chief inspector.

Guarded Plants

Maintenance schedule and testing

- 21 (1)** An owner, chief power engineer or chief plant operator of a regulated plant that is required to be guarded must establish a maintenance schedule for the control, alarm and safety devices and systems and the guarded controls required by Sections 22 to 26 and must maintain them in accordance with the maintenance schedule.
- (2)** An owner, chief power engineer or chief plant operator of a regulated plant that is required to be guarded must test and calibrate, in accordance with the manufacturer's specifications, the control, alarm and safety devices and systems and the guarded controls required by Sections 22 to 26.

Equipment for all guarded plants

- 22 (1)** An owner of a regulated plant that is operated under conditions that require it to be guarded under these regulations must equip the plant with all of the following:
- (a)** an extended alarm system that is capable of initiating an alarm to a monitoring system in a location that is continuously attended when the plant is operating under guarded conditions;
 - (b)** an automatic control system that safely operates the plant when the power engineer or plant operator in charge stops manually operating the controls.
- (2)** An owner of a regulated plant must ensure that when an alarm signal is initiated by an extended alarm system at a guarded plant, the power engineer or plant operator responsible for the plant is immediately notified by the person monitoring the system.
- (3)** An owner of a regulated plant must equip any tripping device required by Sections 23 to 26 with a manual reset that is secured and prevents access by any person other than a power engineer or plant operator.

Guarded fired power boiler plant

- 23** In addition to the equipment required by Section 22, an owner of a guarded fired power boiler plant must equip the plant with all of the following:
- (a)** a device that purges the furnace chamber in accordance with the manufacturer's specifications each time the boiler is put into use;
 - (b)** a flame-failure tripping device that detects a flame failure and instantly stops and prevents the supply of fuel to the boiler if a flame failure occurs;
 - (c)** a low-water-level tripping device, separate from any other device that controls the water level in the boiler during normal operation under automatic control, that instantly stops and prevents the supply of fuel to the boiler if the boiler water falls below the safe operating level specified by the manufacturer;
 - (d)** a high-water-level tripping device, separate from any other device that controls the water level of the boiler during normal operation under automatic control, that instantly stops and prevents the supply of fuel to the boiler if the water in the

- boiler goes above the safe operating level specified by the manufacturer;
- (e) except if the manufacturer's design does not include one, a low-combustion-air-pressure tripping device that instantly stops and prevents the supply of fuel to the boiler if the combustion air falls below the safe operating pressure specified by the manufacturer;
 - (f) a high-pressure tripping device that instantly stops and prevents the supply of fuel to the boiler if the boiler pressure reaches the lower of the following:
 - (i) the maximum allowable working pressure,
 - (ii) an established high-pressure limit specified by the manufacturer;
 - (g) a kill switch device, mounted in a visible and readily accessible location outside the boiler room, that enables a person to turn the boiler off safely in an emergency.

Guarded hot water heating boiler plant

24 In addition to the equipment required by Section 22, an owner of a guarded high-temperature, high-pressure, hot-water heating boiler plant must equip the plant with all of the following:

- (a) a high-water-temperature tripping device that instantly stops and prevents the supply of fuel to the boiler when the water in the boiler goes above the safe operating temperature specified by the manufacturer;
- (b) the devices referred to in clauses 23(a), (b), (c), (e), (f) and (g).

Guarded refrigeration plant

25 (1) In addition to the equipment required by Section 22, an owner of a regulated plant must equip a guarded refrigeration plant with all of the following:

- (a) unless the design prevents the possibility of liquid refrigerant being drawn into the compressor, a high-level-liquid tripping device in the evaporator or the refrigerant suction accumulator that instantly stops the electric motor or prime mover of the compressor and prevents it from re-starting if the liquid in the refrigerant level goes above the safe level specified by the manufacturer;
- (b) a high-temperature tripping device, located in the coolant discharge line or in the discharge line of the compressor, that instantly stops the electric motor or prime mover of the compressor and prevents it from re-starting if the coolant or discharge gas goes above the safe operating temperature specified by the manufacturer;
- (c) a high-discharge-pressure tripping device that instantly stops the electric motor or prime mover of the compressor and prevents it from re-starting if the discharge of the compressor goes above the safe operating pressure specified by the manufacturer;

- (d) for a pressurized lubricating oil system, a low-oil-pressure tripping device that instantly stops the electric motor or prime mover of the compressor and prevents it from re-starting if the oil falls below the safe operating pressure specified by the manufacturer;
 - (e) a kill switch device that is mounted in a visible and readily accessible location outside the compressor room that enables a person to turn the compressor off safely in an emergency;
 - (f) a machinery room as required by the applicable PE standards.
- (2) An owner of a regulated plant must equip a guarded refrigeration plant with a vapour detector that activates at the following concentration values:
- (a) for a refrigerant other than ammonia, at a value less than the threshold limit value-time weighted average (TLV/TWA) concentration value for the refrigerant;
 - (b) if the refrigerant is ammonia, at the maximum concentration value for ammonia established in the applicable PE standards.

Guarded compressor plant

26 In addition to the equipment required by Section 22, an owner of a guarded compressor plant must equip the plant with all of the following:

- (a) each of the devices described in clauses 25(1)(c), (d) and (e);
- (b) a high-discharge-temperature tripping device in the discharge line of the compressor that instantly stops the electric motor or prime mover of the compressor and prevents it from re-starting if the discharge gas goes above the safe operating temperature specified by the manufacturer;
- (c) for a water-cooled compressor, one of the following devices that will instantly stop the electric motor or prime mover of the compressor and prevent it from re-starting if the cooling water pressure or temperature is outside the safe operating pressure or temperature specified by the manufacturer:
 - (i) a low-water-pressure tripping device in the cooling water inlet line,
 - (ii) a high-water-temperature tripping device in the cooling water outlet line;
- (d) for an air-cooled compressor, a fan-motor-overload tripping device that instantly stops the electric motor or prime mover of the compressor and prevents it from restarting if the air cooling fan becomes overloaded;
- (e) for a compressor that is driven by an electric motor, a motor-overload tripping device that stops the electric motor of the compressor and prevents it from re-starting if the motor becomes overloaded.

Duties and Responsibilities

Ensuring regulated work complies with PE standards and regulations

27 An owner of a regulated plant or any person performing regulated work in a regulated plant must ensure that regulated work performed at the plant is in compliance with the applicable PE standards and these regulations.

Designation of chief power engineer or chief power operator

- 28 (1)** Except as provided in subsections (2) and (3), an owner of a regulated plant must designate 1 of the following as required for the class of plant owned:
- (a) a power engineer as chief power engineer for the plant;
 - (b) [a] plant operator as chief plant operator for the regulated plant.
- (2)** An owner who owns more than 1 regulated plant on a plant site may designate 1 person under subsection (1) for all the regulated plants on that plant site.
- (3)** An owner who owns 1 or more guarded regulated plants operating under minimum supervision may designate 1 person under subsection (1) for all the guarded regulated plants.
- (4)** An owner of a regulated plant must ensure that the chief power engineer or chief plant operator of the plant
- (a) is available during the regular working hours of the plant; and
 - (b) does not work as a shift power engineer while employed as a chief power engineer in a first or second class boiler plant.
- (5)** An owner of a regulated plant must ensure that the chief power engineer or chief plant operator of the plant complies with Section 30.

Temporary chief power engineer or temporary chief plant operator

- 29 (1)** If the chief power engineer or chief plant operator of a regulated plant is absent from a plant site for more than 96 consecutive hours, the owner of the plant must assign the duties and responsibilities of the chief power engineer or chief plant operator to another power engineer or plant operator at the regulated plant to act as temporary chief power engineer or chief plant operator for the plant during the absence.
- (2)** Except as provided in Section 32, an owner of a regulated plant must ensure that a temporary chief power engineer or chief plant operator holds a class of PE licence not more than 1 class lower than the class of PE licence required of the chief power engineer or chief plant operator who is absent.
- (3)** An owner of a regulated plant must not assign duties and responsibilities to a temporary chief power engineer or chief plant operator under this Section for longer than either of the following:
- (a) 30 calendar days a year;

- (b) the number of days a year authorized in writing by the PE chief inspector.

Duties of chief power engineer or chief plant operator

- 30 (1)** The chief power engineer or chief plant operator of a regulated plant must establish and implement procedures for safely installing, inspecting, operating and maintaining the plant and plant equipment in accordance with the applicable PE standards.
- (2) To ensure the procedures referred to in subsection (1) are carried out correctly, the chief power engineer or chief plant operator of a regulated plant must supervise the work and duties of all of the following:
- (a) power engineer or plant operators on the plant site;
 - (b) trainees;
 - (c) any person doing maintenance work in the regulated plant that affects the operation of the plant.
- (3) The chief power engineer or chief plant operator of a regulated plant must ensure all of the following:
- (a) that a logbook is maintained in accordance with Section 33;
 - (b) that the plant is operated by enough power engineers or plant operators who hold the required class of PE licence and are adequately trained to operate the regulated plant;
 - (c) that a copy of both the Act and these regulations are available to the power engineers and plant operators on the plant site.

Temporary shift power engineer or shift plant operator

- 31 (1)** If a shift power engineer or shift plant operator is absent from a regulated plant, the chief power engineer or chief plant operator of the plant may assign the duties and responsibilities of the shift power engineer or shift plant operator to another power engineer or plant operator to act as a temporary shift power engineer or shift plant operator for the plant during the absence.
- (2) Except as provided in Section 32, the chief power engineer or chief plant operator of a regulated plant must ensure that a temporary shift power engineer or shift plant operator holds a class of PE licence not more than 1 class lower than the class of PE licence required of the shift power engineer or shift plant operator who is absent.
- (3) ~~An~~ [A] chief power engineer or chief plant operator of a regulated plant must not assign duties and responsibilities to a temporary shift power engineer or shift plant operator under this Section for longer than either of the following:
- (a) 30 calendar days a year;
 - (b) the number of days a year authorized in writing by the PE chief inspector.

Approval to perform duties of next higher class of licence

32 In special circumstances, the PE chief inspector may approve the holder of a class of PE licence to perform the duties of a person holding a class of PE licence of the next higher class in accordance with conditions established by the PE chief inspector and for the time period specified by the PE chief inspector.

Logbooks

- 33 (1)** An owner of a regulated plant must provide a logbook at each plant site.
- (2)** For each shift, a power engineer or plant operator in charge of the shift must record all of the following information in the logbook and sign the logbook:
- (a) the time, date and designation of the shift;
 - (b) their name;
 - (c) the name of each power engineer or plant operator on the shift;
 - (d) the name of each trainee on the shift;
 - (e) the plant conditions;
 - (f) any abnormal plant conditions and any corrective actions required or taken;
 - (g) any order or direction given that is
 - (i) contrary to normal operating procedure, or
 - (ii) in addition to normal operating procedure;
 - (h) all of the following for any order or direction referred to in clause (g):
 - (i) the name of the person who gave the order or direction,
 - (ii) the time the order or direction was given,
 - (iii) the reason for the order or direction;
 - (i) except as provided in subsection (3), the nature and frequency of any preventative maintenance procedures provided for the plant, including the testing and recording of all operational logging, control, alarm and safety systems;
 - (j) except as provided in subsection (3), details of any repairs made to the plant, including all of the following:
 - (i) the time the repairs were started,
 - (ii) the time the repairs were completed,

- (iii) the name of the person who made the repairs.
- (3) The plant operator or power engineer does not have to record the information required by clause (2)(i) or (j) in the logbook if the information is recorded separately by the owner of the regulated plant in records that are readily available to a PE inspector and the chief power engineer or chief plant operator.
- (4) An owner of a regulated plant must keep the logbook and any information recorded under subsection (3) available for inspection by a PE inspector for at least 12 months from the date information was last recorded.

Electronic logbooks

- 34** (1) The information recorded in a logbook may be computerized if the use of an electronic logbook is approved by the PE chief inspector.
- (2) The signature of a individual required to sign a logbook may be in the form of an electronic signature if the electronic signature can only be entered into the computer by the individual.
- (3) An electronic logbook for a regulated plant must have a tamper-proof security feature that permits saved information to be changed only by the software administrator and the chief power engineer or chief plant operator for the plant.

Compliance audits

- 35** An owner of a regulated plant must make any information requested by a PE inspector available for review for a compliance audit, including all of the following:
- (a) any information related to the operation of the plant;
 - (b) any evidence or records related to registration of the plant;
 - (c) any evidence or records related to supervision of the plant, including any authorization for reduced supervision of the plant;
 - (d) any evidence or records related to a current maintenance contract for an unsupervised plant;
 - (e) evidence or records related to PE certificates of qualification or PE licences held by employees at the plant.

Notice of incident under Section 13 of Act

- 36** The notice of an incident required under Section 13 of the Act involving a regulated plant must be given by telephone, fax or e-mail no later than 24 hours after the incident occurs and must be followed by a written report if required by the Administrator or the Administrator's designate.

PE Licences

PE licence required to perform regulated work

- 37** (1) Except as provided under Sections 38 and 55, a person must not perform a category of

regulated work under these regulations unless the person holds a class of PE licence that authorizes the person to perform the category of regulated work.

- (2) Except as provided under Sections 38 and 55, a person must not employ or permit a person to perform a category of regulated work under these regulations unless the person performing the work holds a class of PE licence that authorizes the person to perform the category of regulated work.

Certificates of qualification issued under *Crane Operators and Power Engineers Act*

38 An individual whose certificate of qualification issued under the *Crane Operators and Power Engineers Act* is continued under subsection 52(1) of the Act is not required to hold a PE licence to perform the same regulated work under these regulations, but must apply for a PE licence under Section 41 to continue to be authorized to perform regulated work under these regulations after the certificate of qualification expires.

Producing PE licence on request

- 39** (1) A person performing regulated work under these regulations must produce their PE licence when requested by a PE inspector.
- (2) Failing to produce a PE licence under subsection (1) is *prima facie* evidence that the person does not hold a PE licence.

Classes of PE licences

40 The classes of PE licences are as follows:

- (a) interprovincial first class engineer licence;
- (b) interprovincial second class engineer licence;
- (c) interprovincial third class power engineer licence;
- (d) interprovincial fourth class power engineer licence;
- (e) Provincial first class power engineer licence;
- (f) Provincial second class power engineer licence;
- (g) Provincial third class power engineer licence;
- (h) Provincial fourth class power engineer licence;
- (i) Provincial first class refrigeration plant operator licence;
- (j) second class refrigeration plant operator licence;
- (k) Provincial compressor plant operator licence;
- (l) Provincial unfired power boiler plant operator licence.

Applying for and renewing PE licence

- 41** (1) An individual may apply for a specified class of PE licence or renewal of their PE licence by submitting a completed application form together with all of the following to the PE chief inspector:
- (a) payment of the applicable PE fee;
 - (b) proof of the applicant's identity;
 - (c) the class of PE licence applied for;

- (d) proof satisfactory to the PE chief inspector that the applicant holds either
 - (i) the type and class of PE certificate of qualification required in Sections 43 to 54 for the class of PE licence applied for, or
 - (ii) an equivalent certificate of qualification issued by another jurisdiction as permitted under Section 71.
- (2) The PE chief inspector must not issue a PE licence that authorizes an individual to perform regulated work that is not covered by the type and class of PE certificate of qualification held by the individual.

Expiry and reinstatement of PE licences

- 42 (1)** A PE licence is valid until the expiry date specified on the PE licence unless it is suspended or revoked earlier by the PE chief inspector.
- (2) Subject to subsection (3) for licences expired for longer than 4 years, an individual whose licence has expired or will soon expire may reapply for a PE licence in the same manner as applying for a licence under Section 41.
 - (3) To apply for reinstatement of a PE licence that has been expired for longer than 4 years, an individual may be required by the PE chief inspector to successfully write an examination approved by the PE chief inspector in addition to the requirements of Section 41.

Interprovincial first class power engineer licence

- 43 (1)** An individual who holds an interprovincial first class power engineer certificate of qualification may apply for an interprovincial first class power engineer licence.
- (2) An individual who holds an interprovincial first class power engineer licence may act as any of the following for any regulated plant:
 - (a) chief power engineer;
 - (b) chief plant operator;
 - (c) shift power engineer;
 - (d) shift plant operator;
 - (e) assistant shift power engineer;
 - (f) assistant shift plant operator.

Interprovincial second class power engineer licence

- 44 (1)** An individual who holds an interprovincial second class power engineer certificate of qualification may apply for an interprovincial second class power engineer licence.
- (2) An individual who holds an interprovincial second class power engineer licence may act as any of the following:
 - (a) chief power engineer or chief plant operator for any of the following regulated plants:

- (i) a second, third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) any class of refrigeration plant,
 - (v) a compressor plant;
- (b) any of the following for any regulated plant:
- (i) shift power engineer,
 - (ii) shift plant operator,
 - (iii) assistant shift power engineer,
 - (iv) assistant shift plant operator.

Interprovincial third class power engineer licence

- 45 (1)** An individual who holds an interprovincial third class power engineer certificate of qualification may apply for an interprovincial third class power engineer [licence].
- (2)** An individual who holds an interprovincial third class power engineer licence may act as any of the following:
- (a) chief power engineer or chief plant operator for any of the following regulated plants:
 - (i) a third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) a second class refrigeration plant
 - (v) a compressor plant;
 - (b) shift power engineer or shift plant operator for any of the following regulated plants:
 - (i) a second, third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) any class of refrigeration plant,
 - (v) a compressor plant;
 - (c) assistant shift power engineer for any regulated plant;
 - (d) assistant shift plant operator for any regulated plant.

Interprovincial fourth class power engineer licence

- 46 (1)** An individual who holds an interprovincial fourth class power engineer certificate of qualification may apply for an interprovincial fourth class power engineer licence.
- (2)** An individual who holds an interprovincial fourth class power engineer licence may act as any of the following:

- (a) chief power engineer or chief plant operator for any of the following plants;
 - (i) a fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) a fourth class heating boiler plant,
 - (iv) a second class refrigeration plant that
 - (A) uses Group A1 or B1 refrigerant and has a TPPR of 750 kW or lower,
or
 - (B) uses Group A2, A3, B2 or B3 refrigerant and has a TPPR of 150 kW
or lower,
 - (v) a compressor plant;
- (b) shift power engineer or shift plant operator for any of the following regulated plants:
 - (i) a third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) a second class refrigeration plant,
 - (iv) a compressor plant;
- (c) assistant shift power engineer or assistant shift plant operator for any of the following regulated plants:
 - (i) a second, third or fourth class fired power boiler plant, or a plant with a higher TPPR if special approval to act is given in writing by the PE chief inspector,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) any class of refrigeration plant,
 - (v) a compressor plant.

Provincial first class power engineer licence

- 47 (1)** An individual who holds a Provincial first class power engineer certificate of qualification may apply for a Provincial first class power engineer licence.
- (2)** An individual who holds a Provincial first class power engineer licence may act as any of the following for any class of boiler plant or a compressor plant:
- (a) chief power engineer;
 - (b) shift power engineer;

- (c) assistant shift power engineer.

Provincial second class power engineer licence

- 48 (1)** An individual who holds a Provincial second class power engineer certificate of qualification may apply for a Provincial second class power engineer licence.
- (2)** An individual who holds a Provincial second class power engineer licence may act as any of the following:
- (a) chief power engineer for any of the following regulated plants:
 - (i) a second, third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) a compressor plant;
 - (b) shift power engineer or assistant shift power engineer for any of the following regulated plants:
 - (i) any class of boiler plant,
 - (ii) a compressor plant.

Provincial third class power engineer licence

- 49 (1)** An individual who holds a Provincial third class power engineer certificate of qualification may apply for a Provincial third class power engineer licence.
- (2)** An individual who holds a Provincial third class power engineer licence may act as any of the following:
- (a) chief power engineer for any of the following regulated plants:
 - (i) a third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) a compressor plant;
 - (b) shift power engineer for any of the following regulated plants:
 - (i) a second, third or fourth class fired power boiler plant,
 - (ii) any unfired power boiler plant,
 - (iii) any class of heating boiler plant,
 - (iv) a compressor plant;
 - (c) assistant shift power engineer for any of the following regulated plants:

- (i) any class of fired power boiler plant,
- (ii) any unfired power boiler plant,
- (iii) any class of heating boiler plant,
- (iv) a compressor plant.

Provincial fourth class power engineer licence

50 (1) An individual who holds a Provincial fourth class power engineer certificate of qualification may apply for a Provincial fourth class power engineer.

(2) An individual who holds a Provincial fourth class power engineer licence may act as any of the following:

(a) chief power engineer for any of the following regulated plants:

- (i) a fourth class fired power boiler plant,
- (ii) any unfired power boiler plant,
- (iii) a fourth class heating boiler plant,
- (iv) a compressor plant;

(b) shift power engineer for any of the following regulated plants:

- (i) a third or fourth class fired power boiler plant,
- (ii) any unfired power boiler plant,
- (iii) any class of heating boiler plant,
- (iv) a compressor plant;

(c) assistant shift power engineer for any of the following regulated plants:

- (i) a second class fired power boiler plant or a plant with a higher TPPR if special approval to act is given in writing by the PE chief inspector,
- (ii) any unfired power boiler plant,
- (iii) any class of heating boiler plant,
- (iv) a compressor plant.

First class refrigeration plant operator licence

51 (1) An individual who holds a Provincial first class refrigeration plant operator certificate of qualification may apply for a first class refrigeration plant operator licence.

(2) An individual who holds a first class refrigeration plant operator licence may act as any of the following for any class of refrigeration plant:

- (a) chief plant operator;
- (b) shift plant operator;
- (c) assistant shift plant operator.

Second class refrigeration plant operator licence

- 52 (1)** An individual who holds an interprovincial second class refrigeration plant operator certificate of qualification or a Provincial second class refrigeration plant operator certificate of qualification may apply for a second class refrigeration plant operator licence.
- (2)** An individual who holds a second class refrigeration plant operator licence may act as any of the following:
- (a) chief plant operator for a second class refrigeration plant;
 - (b) any of the following for any class of refrigeration plant:
 - (i) shift plant operator;
 - (ii) assistant shift plant operator.

Compressor plant operator licence

- 53 (1)** An individual who holds a Provincial compressor plant operator certificate of qualification may apply for a compressor plant operator licence.
- (2)** An individual who holds a compressor plant operator licence may act as any of the following for any compressor plant:
- (a) chief plant operator;
 - (b) shift plant operator;
 - (c) assistant shift plant operator.

Unfired power boiler plant operator licence

- 54 (1)** An individual who holds a Provincial unfired power boiler plant operator certificate of qualification may apply for an unfired power boiler plant operator licence.
- (2)** An individual who holds an unfired power boiler plant operator licence may act as any of the following for any unfired power boiler plant:
- (a) chief plant operator;
 - (b) shift plant operator;
 - (c) assistant shift plant operator.

Trainees

- 55 (1)** A trainee at a regulated plant is not required to hold the class of PE licence required to perform regulated work at the plant if all of the following conditions are met:
- (a) the trainee is under the direct supervision of a power engineer or plant operator who
 - (i) has charge of the regulated plant at all times, and
 - (ii) holds a class of PE licence that requires the type and class of PE certificate of qualification that the trainee is training for or a higher type and class of

PE certificate of qualification;

- (b) any regulated work performed by the trainee is within the scope of
 - (i) the class of PE licence held by the supervising power engineer or plant operator, and
 - (ii) the type and class of PE certificate of qualification the trainee is training for or a lower type and class of PE certificate of qualification;
 - (c) the trainee complies with all the other requirements of the Act and these regulations.
- (2) An owner of a regulated plant must ensure that a trainee who is not an apprentice registers with the PE chief inspector before working in the plant.
- (3) An owner of a regulated plant must ensure that
- (a) all the conditions in subsection (1) are met; and
 - (b) the direct supervision provided to a trainee is appropriate for the risk associated with the regulated work the trainee is performing.
- (4) An owner of a regulated plant must not use a trainee as a replacement for a power engineer or plant operator who is required under Sections 43 to 54 to hold either of the following:
- (a) a class of PE licence that requires the type and class of PE certificate of qualification the trainee is training for;
 - (b) a higher class of PE licence than described in clause (a).
- (5) An owner of a regulated plant must submit a training program to the PE chief inspector for approval for any trainee who is not an apprentice.

PE Certificates of Qualification

Types and classes of PE certificates of qualification

56 (1) The classes for interprovincial type PE certificates of qualification are as follows:

- (a) interprovincial first class power engineer certificate of qualification;
 - (b) interprovincial second class power engineer certificate of qualification;
 - (c) interprovincial third class power engineer certificate of qualification;
 - (d) interprovincial fourth class power engineer certificate of qualification;
 - (e) interprovincial second class refrigeration plant operator certificate of qualification.
- (2) The classes for Provincial type PE certificates of qualification are as follows:
- (a) Provincial first class power engineer certificate of qualification;

- (b) Provincial second class power engineer certificate of qualification;
- (c) Provincial third class power engineer certificate of qualification;
- (d) Provincial fourth class power engineer certificate of qualification;
- (e) Provincial first class refrigeration plant operator certificate of qualification;
- (f) Provincial second class refrigeration plant operator certificate of qualification;
- (g) Provincial compressor plant operator certificate of qualification;
- (h) Provincial unfired power boiler plant operator certificate of qualification.

Applying for PE certificate of qualification

57 An individual may apply for a specified type and class of PE certificate of qualification by submitting a completed application form together with all of the following to the PE chief inspector:

- (a) payment of the applicable PE fees;
- (b) proof of the applicant's identity;
- (c) the type and class of PE certificate of qualification applied for;
- (d) proof satisfactory to the PE chief inspector that the applicant either
 - (i) meets the practical experience requirements for the type and class of PE certificate of qualification applied for, including written verification of their practical experience from the chief engineer or chief plant operator of the plant where they obtained it, or
 - (ii) for a Provincial-type PE certificate of qualification issued under subsection 71(1), holds a certificate of qualification from another jurisdiction or organization and has equivalent experience and qualifications;
- (e) proof satisfactory to the PE chief inspector that the applicant has successfully completed all examinations required for the type and class of PE certificate of qualification applied for.

Classes of Provincial PE certificate of qualification renewed or replaced only

58 (1) Except as provided under subsection (2) and subsection 71(1), the following Provincial PE certificates of qualification may be granted by the PE chief inspector only to renew or replace valid Provincial certificates of qualification:

- (a) Provincial first class power engineer certificate of qualification;
 - (b) Provincial second class power engineer certificate of qualification;
 - (c) Provincial third class power engineer certificate of qualification;
 - (d) Provincial fourth class power engineer certificate of qualification.
- (2)** The PE chief inspector may grant a Provincial PE certificate of qualification if the PE chief inspector decides that it is appropriate.

Term of certificate of qualification

59 (1) A PE certificate of qualification is valid unless suspended or revoked by the PE chief inspector.

- (2)** A PE certificate of qualification is not transferable and may be used only by the

individual who was granted the certificate of qualification.

Producing PE certificate of qualification on request

- 60 (1)** A holder of a PE certificate of qualification must produce their PE certificate of qualification when requested by a PE inspector.
- (2)** Failing to produce a PE certificate of qualification under subsection (1) is *prima facie* evidence that the person does not hold a PE certificate of qualification.

Practical Experience Required for PE Certificates of Qualification

Months of practical experience calculated

- 61** For the practical experience required in Sections 62 to 65, 166 hours of practical experience is equal to 1 month of practical experience and any more hours of experience acquired in a month cannot be carried over to another month.

Practical experience for interprovincial power engineer certificates of qualification

- 62 (1)** An applicant for an interprovincial first class power engineer certificate of qualification must meet 1 of the following practical experience requirements:
- (a) 30 months' experience as a chief power engineer in a second class boiler plant;
 - (b) 30 months' experience as a shift power engineer in a first class boiler plant;
 - (c) 42 months' experience as an assistant shift power engineer in a first class boiler plant;
 - (d) 15 months of the type of experience described in clauses (a), (b), or (c), and 30 months' experience designing, constructing, installing, repairing or maintaining equipment of a boiler plant;
 - (e) 15 months of the type of experience described in clauses (a), (b) or (c), and a degree in mechanical or chemical engineering.
- (2)** An applicant for an interprovincial second class power engineer certificate of qualification must meet 1 of the following practical experience requirements:
- (a) 24 months' experience as a chief power engineer in a third class boiler plant;
 - (b) 24 months' experience as a shift power engineer in a second class boiler plant;
 - (c) 24 months' experience as an assistant shift power engineer in a first class boiler plant;
 - (d) 12 months of the type of experience described in clauses (a), (b), or (c), and at least 24 months' experience designing, constructing, installing, repairing or maintaining the equipment of a boiler plant;
 - (e) 12 months of the type of experience described in clauses (a), (b) or (c), and a

degree in mechanical or chemical engineering.

- (3) An applicant for an interprovincial third class power engineer certificate of qualification must meet 1 of the following practical experience requirements:
- (a) 12 months' experience as a chief power engineer in a fourth class boiler plant;
 - (b) 12 months' experience as a shift power engineer in a third class boiler plant;
 - (c) 12 months' experience as an assistant shift power engineer in a second class boiler plant;
 - (d) 6 months of the type of experience described in clauses (a), (b) or (c), and at least 18 months' experience designing, constructing, installing, repairing or maintaining equipment of a boiler plant;
 - (e) 6 months of the type of experience described in clause (a), (b) or (c), and successful completion of a course in power engineering acceptable to the PE chief inspector leading to an interprovincial third class power engineer PE certificate of qualification;
 - (f) 6 months of the type of experience described in clause (a), (b) or (c), and a degree in mechanical or chemical engineering;
 - (g) 6 months of the type of experience described in clause (a), (b) or (c), and 12 months' experience as a chief power engineer in an unfired power boiler plant;
 - (h) 6 months of the experience described in clause (a), (b) or (c), and 12 months' experience as a shift power engineer in an unfired power boiler plant.
- (4) An applicant for an interprovincial fourth class power engineer certificate of qualification must meet 1 of the following practical experience requirements:
- (a) 12 months' experience training to operate a fourth class fired power boiler plant;
 - (b) 12 months' experience training to operate a fourth class heating boiler plant;
 - (c) 6 months of the type of experience described in clause (a) or (b), and at least 12 months' experience designing, constructing, installing, repairing or maintaining equipment of a boiler plant;
 - (d) 6 months of the type of experience described in clause (a) or (b), and successful completion of a course in power engineering acceptable to the PE chief inspector leading to an interprovincial fourth class power engineer certificate of qualification;
 - (e) 3 months of the type of experience described in clause (a) or (b), and a degree in mechanical or chemical engineering;

- (f) 6 months of the type of experience described in clause (a) or (b), and 12 months' experience training in the operation of any unfired power boiler plant.

Practical experience for refrigeration plant operator certificates of qualification

63 (1) An applicant for a Provincial first class refrigeration plant operator certificate of qualification must meet 1 of the following practical experience requirements:

- (a) 24 months' experience as a chief plant operator of a second class refrigeration plant;
 - (b) 24 months' experience as a shift plant operator of a first class refrigeration plant;
 - (c) 12 months of the type experience described in clauses (a) or (b), and at least 24 months' experience designing, constructing, installing, repairing or maintaining equipment of a refrigeration plant;
 - (d) 12 months of the type of experience described in clauses (a) or (b), and a degree in mechanical or chemical engineering.
- (2)** An applicant for a Provincial second class refrigeration plant operator certificate of qualification or an interprovincial second class refrigeration plant operator certificate of qualification must meet 1 of the following practical experience requirements:
- (a) 12 months' experience training in the operation of refrigeration equipment in a refrigeration plant;
 - (b) a refrigeration and air conditioning mechanic certificate of qualification issued under the *Apprenticeship and Trades Qualifications Act*, or an equivalent certification;
 - (c) 3 months of the type of experience described in clause (a), and a degree in mechanical or chemical engineering.

Practical experience for compressor plant operator certificate of qualification

64 An applicant for a Provincial compressor plant operator certificate of qualification must meet 1 of the following practical experience requirements:

- (a) 12 months' experience training to operate air or gas compressor equipment in a compressor plant;
- (b) 6 months of the type of experience described in clause (a), and 12 months' experience designing, constructing, installing, repairing or maintaining equipment of a compressor plant;
- (c) 3 months of the type of experience described in clause (a), and a degree in mechanical or chemical engineering.

Practical experience for unfired power boiler plant operator certificate of qualification

65 An applicant for a Provincial unfired boiler plant operator certificate of qualification must meet 1 of the following practical experience requirements:

- (a) 12 months' experience training to operate boiler equipment in any unfired power boiler plant;
- (b) 6 months of the type of experience described in clause (a), and 12 months' experience designing, constructing, installing, repairing or maintaining the equipment of any unfired boiler plant;
- (c) 3 months of the type of experience described in clause (a), and a degree in mechanical or chemical engineering.

Examinations

Examination eligibility

- 66 (1)** An individual who applies to take an examination leading to a PE certificate of qualification must meet 1 of the following educational requirements:
- (a) successful completion of grade 12 from a high school in the Province, or the equivalent;
 - (b) successful completion of a course in power engineering acceptable to the PE chief inspector that is
 - (i) at the same level as the type and class of PE certificate of qualification the examination for which the individual is applying, and
 - (ii) approved by the PE chief inspector as equivalent to clause (a).
- (2)** Except as provided in subsection (3), an applicant for examination must hold a PE certificate of qualification that is no lower than 1 class lower than the class of PE certificate of qualification that the examination is leading toward.
- (3)** Subsection (2) does not apply to an applicant for an examination leading to an entry level class of PE certificate of qualification.

Applying for examination

- 67 (1)** An individual may apply to take an examination leading to a PE certificate of qualification by submitting a completed application form together with all of the following to the PE chief inspector:
- (a) payment of the applicable PE fees;
 - (b) proof of the applicant's identity;
 - (c) the examination requested, including the type and class of PE certificate of qualification the examination is leading toward;
 - (d) proof satisfactory to the PE chief inspector that the applicant meets the eligibility requirements in Section 66;

- (e) proof satisfactory to the PE chief inspector that the applicant has completed the practical experience required for the type and class of PE certificate of qualification the examination applied for is leading toward, including written verification of their practical experience from the chief engineer or chief plant operator of the plant where they obtained the experience.

Examination pass mark

68 The passing grade for an examination leading to a PE certificate of qualification is 65%.

Re-examination

- 69** (1) Except as provided in subsection (3), no sooner than 60 days after the date of an examination, an individual who failed the examination may apply in writing to the PE chief inspector to retake the examination.
- (2) An applicant for re-examination must pay the applicable PE fee.
- (3) An individual who fails an examination 3 or more consecutive times cannot apply to retake the same examination for at least 6 months from the date they last took the examination, and must provide documentation of any additional training the individual has taken since the failed examination that is acceptable to the PE chief inspector before they can retake the examination.

Equivalent acceptable qualifications

- 70** (1) The PE chief inspector may accept, in accordance with this Section, any of the equivalent qualifications listed in subsection (2) in place of some or all of the following:
- (a) the practical experience qualifications required for a PE certificate of qualification in Sections 62 to 65;
 - (b) the examination eligibility requirements in Section 66.
- (2) The following may be considered as acceptable equivalent qualifications:
- (a) relevant service or training in the Canadian Forces or the equivalent;
 - (b) experience in constructing, operating, repairing, or testing a type of regulated plant that the PE chief inspector determines is relevant to the type and class of PE certificate of qualification applied for;
 - (c) successful completion of courses in a technical or trade school recognized by the PE chief inspector;
 - (d) the completion in whole or part of a correspondence course or formal course of study in power engineering recognized by the PE chief inspector.
- (3) Completion of part or all of a course in power engineering under clause (2)(c) or (d) may be considered equivalent to either of the following:

- (a) up to 12 months of fired power boiler plant operating experience applied toward an interprovincial first class power engineer certificate of qualification;
 - (b) up to 9 months of fired power boiler plant operating experience applied toward an interprovincial second class power engineer certificate of qualification.
- (4) The PE chief inspector may consider completion of all or part of a course of study to be equivalent to the practical experience required by Sections 62 to 65 and may determine the amount of experience that the course is equivalent to.

Other Jurisdictions

Recognition of other jurisdictions and organizations

- 71 (1)** The PE chief inspector may grant a Provincial-type PE certificate of qualification to an individual who applies under Section 57 who
- (a) holds a certificate of qualification from another jurisdiction or organization; and
 - (b) has practical experience and educational qualifications that are sufficiently equivalent to the requirements for the Provincial-type PE certificate of qualification under these regulations.
- (2) An individual from another jurisdiction who holds a valid certificate of qualification issued by the jurisdiction that is equivalent to a class of interprovincial-type PE certificate of qualification under these regulations is eligible to apply under Section 41 for a class of PE licence for which the certificate is required.
- (3) If an applicant in subsection (2) holds an interprovincial PE certificate of qualification with an expiry date, the applicant is also eligible for the associated type and class of PE certificate of qualification.

Offences

Fraudulent use of PE certificate of qualification or PE licence

72 A person must not make fraudulent use of a PE certificate of qualification or PE licence.

Incompetence or gross negligence

73 A person who holds a PE certificate of qualification or PE licence must not act incompetently or with gross negligence when acting under the authority of their certificate or licence.

Ensuring compliance with requirements for regulated plant

74 An owner or operator of a regulated plant must ensure that the requirements for registration, supervision and guarding under these regulations that apply to the plant are complied with.

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