



# Seattle Department of Construction & Inspections

*2020 Boiler and Pressure Vessel Code  
and  
Steam Engineer and Boiler Operator License Law  
(Chapter 6.420 SMC)*

2020 Boiler and Pressure Vessel Code  
Effective: March 15, 2021

Council Bill Number: 119992  
Ordinance Number: 126278

Steam Engineer and Boiler Operator License  
Law (2021 Update)  
Effective July 6, 2021

Council Bill Number: 120085  
Ordinance Number: 126359



# CITY OF SEATTLE

## *2020 Boiler and Pressure Vessel Code*

**Effective March 15, 2021**

### **Seattle Department of Construction and Inspections**

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**Steve Frazier**, *Chief Boiler Inspector*

The *2020 Seattle Boiler and Pressure Vessel Code* would not be possible without the hard work of many people. Our code update process starts with a review by our Seattle Department of Construction and Inspections (SDCI) staff of the changes in the Washington Administrative Code (WAC) affecting boilers and pressure vessels. Based on this information, they recommend changes to improve Seattle's code. We ask the public and various stakeholders to comment on proposed changes and to submit changes of their own. After reviewing this information, we develop a draft ordinance of written amendments.

The City's Construction Codes Advisory Board (CCAB) reviews these proposed amendments. The committee includes construction and design professionals who use their expertise to advise us about the impact of changes in the Code. Based on their recommendations, we finalize our draft ordinance and present it to the Seattle City Council for their approval. We are grateful to volunteers and SDCI staff who helped us create a code that benefits the public by making these installations safer.

### **Significant Changes in the 2020 Seattle Boiler and Pressure Vessel Code**

#### Section 4 – Permits

- The installer is now responsible for obtaining a permit and calling for an inspection.
- Permits are now required for repairs and alterations to boilers and pressure vessels.
- Pressure vessels located in B, F, H, M, R, S, and U occupancies having a volume of 5 cubic feet or less and operated at pressures not exceeding 250 PSI are exempt from permits.
- Emergency shut down switches are no longer required for boiler plants operating at less than 400,000 BTU/hr.

#### Section 5 – In-Service Inspections

- Minimum inspection frequency changed to every 4 years for low pressure water boilers not using corrosion inhibitors.

#### Section 6 – Repairs and Alterations

- New provisions require permits for repairs and alterations and the submittal of repair and alteration documentation to the jurisdiction.

# Boiler & Pressure Vessel Inspection Program

## What Is It?

We inspect newly installed boilers and pressure vessels. We inspect commercially owned boilers once a year and pressure vessels every other year. Our inspections keep people safe by making sure the *Seattle Boiler and Pressure Vessel Code* is followed.

Our inspectors also check licenses, respond to complaints, and investigate accidents.

## How do I Get a Permit?

**On-Line:** To apply for a permit online go to <https://cosaccela.seattle.gov/Portal/welcome.aspx>

## When Can I Call for My Inspection?

- When your installation is finished and your boiler/pressure vessel is ready to use.
- When the date on your certificate of inspection for your operating boiler/pressure vessel is about to expire.

### Special Information for Insurance Inspectors

- We email inspection reports to insurance companies about one month before the inspection is needed.
- Send us your notices of coverage or cancellation promptly.
- If you haven't received an inspection report for a location you intend to inspect, please ask us for a report of boiler and pressure vessels at that location.
- Return all inspection reports to us promptly if you cancel insurance coverage.

**More Questions?** Call (206) 684-8459.

## How do I Schedule an Inspection?

Contact the inspector assigned to your area and they will give you the date and time of the inspection.

### NW Quadrant Inspector (district 1)

Justin Ketzenberg  
(206) 256-5516

### NE Quadrant Inspector (district 2)

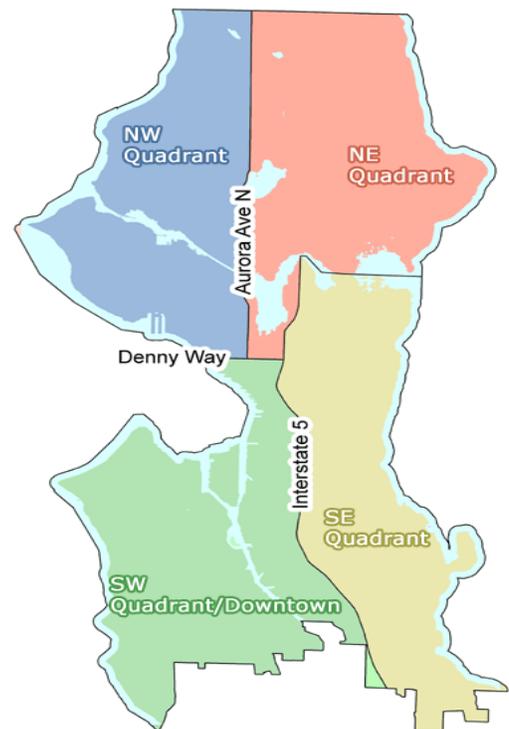
Zach Burgett  
(206) 684-8460

### SE Quadrant Inspector (district 3)

Keith Black  
(206) 684-5857

### SW Quadrant Inspector (district 4)

Roger Smith  
(206) 684-5853



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# 2020 Seattle Boiler and Pressure Vessel Code

## Section 1 – Administrative

**1.1 Title.** These regulations shall be known as the “Seattle Boiler and Pressure Vessel Code,” may be cited as such and will be referred to herein as “this code.”

**1.2 Purpose.** The purpose of this code is to provide minimum standards for the protection of public health, safety, and property by regulating and controlling the quality, location, and installation of boilers and pressure vessels, piping, and appurtenances. It is not intended to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this code.

### 1.3 General.

**1.3.1 Scope.** This code applies to the construction, erection, installation, operation, inspection, repair and alteration, relocation, replacement, addition to, use or maintenance of all boilers and pressure vessels. The design and testing of equipment regulated by this code are subject to the approval of the code official.

**1.3.2 Applicability of city laws.** A boiler permit application shall be considered under the Seattle Boiler Code in effect on a date as provided below, or on a date as otherwise required by law.

A. Boiler code permit applications shall be considered under the codes in effect on the date used to determine the codes applicable to the building permit application in accordance with the Seattle Building Code Section 101.3 if any of Items 1 through 3 apply:

1. The boiler permit application is submitted as part of a building permit application;
2. The boiler permit application is for work directly associated with a building permit but is submitted separately from the building permit application; or
3. The boiler permit application is for initial tenant alterations submitted no later than 18 months after the date of the approved final inspection for the building, and is submitted before the expiration date of the building permit for the tenant alteration, as determined by Seattle Building Code Section 106.9.

B. Boiler permit applications, other than those subject to Item 1, shall be considered under the codes in effect on the date a complete boiler permit application is submitted that complies with all the requirements of Section 4.1, Permits Required.

**1.3.3 Conflicts.** Where, in any specific case, different sections of this code specify different materials, methods of construction, or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

**1.3.4 Workmanship.** All equipment, appurtenances, devices, and piping shall be installed in a workmanlike manner, in accordance with recognized engineering practice, and in conformity with the provisions and intent of this code.

## **1.4 Powers and duties of the code official**

### **1.4.1 General.**

A. Applications and permits. The code official shall receive applications, review construction documents, and issue permits for the erection and alteration, demolition, and moving of buildings and structures; inspect the premises for which such permits have been issued; and enforce compliance with provisions of this code.

B. Inspections. The code official shall make the required inspections or the code official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The code official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

C. Notices and orders. The code official shall issue necessary notices or orders to ensure compliance with this code.

D. The code official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

**1.4.2 Designees.** The code official may appoint such officers, inspectors, assistants, and employees, including the Chief Pressure Systems Inspector, as authorized from time to time. The code official may authorize such employees and other agents as may be necessary to carry out the functions of the code official.

**1.4.3 Right of entry.** With the consent of the owner or occupier of a building or premises, or pursuant to a lawfully issued warrant, the code official may enter a building or premises at any reasonable time to perform the duties imposed by the code.

**1.4.4 Liability.** Nothing in this code is intended to be nor shall be construed to create or form the basis for any liability on the part of the City, or its officers, employees, or agents, for any injury or damage resulting from 1) the failure of equipment to conform to the provisions of this code, or 2) any inspection, notice, order, certificate, permission or approval authorized or issued, or 3) the implementation or enforcement of this code, or 4) any action or inaction on the part of the City related in any manner to the enforcement of this code by its officers, employees, or agents. This code shall not be construed to relieve or lessen the responsibility of any person owning, operating, or controlling any equipment, building, or structure for any damages to persons or property caused by defects, nor shall the Seattle Department of Construction and Inspections or The City of Seattle be held to have assumed any such liability by reason of the inspections, permits, or certificates issued under this code.

**1.4.5 Responsibility for Compliance.** Compliance with the requirements of this code is the obligation of the owner of the building, structure, or premises, the duly authorized agent of the owner, or any other person responsible for the condition or work, not the obligation of the City or any of its officers, employees, or agents.

**1.4.6 Cooperation of other officials and officers.** The code official may request, and shall receive, so far as is required in the discharge of the code official's duties, the assistance and cooperation of other officials of The City of Seattle.

**1.4.7 Rules of the code official.** The code official has authority to interpret this code and to adopt and enforce rules and regulations supplemental to this code as may be necessary to clarify the application of this code. Such interpretations, rules, and regulations shall conform to the intent and purpose of this code. The code official shall promulgate, adopt, and issue rules in accordance with the procedures specified in Chapter 3.02 of the Administrative Code, Seattle Municipal Code.

## **1.5 Construction Codes Advisory Board.**

**1.5.1 General.** A committee of the Construction Codes Advisory Board may examine proposed administrative rules and amendments relating to this code and related provisions of other codes and make recommendations to the code official and to the City Council for changes in this code. The committee will be called as needed by the Construction Codes Advisory Board.

## **1.6 Violations, enforcement, and penalties.**

**1.6.1 Violations.** It is a violation of this code for anyone to perform the actions contained in items A-H of this section.

A. Work in violation of code. Install, erect, construct, enlarge, alter, repair, replace, remodel, move, improve, remove, convert or demolish, equip, occupy, use, or maintain any boiler or pressure vessel or auxiliary equipment or cause, allow, or direct the same to be done in the City, contrary to or in violation of any provision of this code.

B. Unapproved material or devices. Use any material or install any device, appliance, or equipment which does not comply with this code or which has not been approved by the code official.

C. Operating without a license. Have charge of, operate, or permit any person to have charge of, or operate, any boiler or steam engine regulated by this code without a license to do so as prescribed by SMC Chapter 6.420.

D. Posted notices. Remove, mutilate, destroy, or conceal any notice or order issued or posted by the code official pursuant to the provisions of this code, or any notice or order issued or posted by the code official in response to a natural disaster or other emergency.

E. Requesting inspections. Conduct work under a permit without requesting an inspection required by this code.

F. Encouraging violation of code. Knowingly aid, abet, counsel, encourage, hire, induce, or otherwise procure another to violate or fail to comply with this code;

G. Non-compliance with notice of violation. Failure to comply with a notice of violation by the date set by the code official in the notice.

H. Complying with orders of the code official. Fail to comply with any order issued by the code official, including but not limited to stop work orders, emergency orders, or hazard correction orders.

**1.6.2 Notice of Violation.** If, after investigation, the code official determines that standards or requirements of this code have been violated, or that orders or requirements have not been complied with, the code official may issue a notice of violation upon the owner, agent, or other person responsible for the action or condition.

A. Contents of notice of violation. The notice of violation shall state:

1. The standards or requirements violated;
2. What corrective action, if any, is necessary to comply; and
3. Set a reasonable date certain for compliance.

B. Serving notice of violation. The notice shall be served upon the owner, agent, or other responsible person by personal service or regular first class mail, addressed to the last known address of such person, or if no address is available after reasonable inquiry, the notice shall be posted in a conspicuous place on the premises. The notice may also be posted on the premises at any time. Nothing in this subsection limits or precludes any action or proceeding to enforce this code, and nothing in this section obligates or requires the code official to issue a notice of violation prior to the imposition of civil or criminal penalties.

C. Code official review. Any person affected by a notice of violation issued pursuant to this Section 1.6.2 may obtain a review of the notice by making a request in writing to the code official within 10 days after service of the notice. When the last day of the period computed is a Saturday, Sunday, or City holiday, the period runs until 5 p.m. of the next business day.

D. Review procedure. The review shall occur not less than 10 or more than 20 days after the request is received by the code official unless otherwise agreed to by the person requesting the review. Any person affected by the notice of violation may submit additional information to the code official. The review shall be made by a representative of the code official who will review any additional information that is submitted and the basis for issuance of the notice of violation. The reviewer may request clarification of the information received and perform a site visit.

E. Decision. After the review, the code official shall render one of the following four decisions:

1. Sustain the notice of violation;
2. Withdraw the notice of violation;
3. Amend the notice of violation; or
4. Continue the review of the notice of violation to a date certain.

F. Order. The code official shall issue an order containing the decision within 15 days after the review is completed and shall cause the order to be sent by regular first-class mail to the person or persons requesting the review, to any person on whom the stop work order was served, and to any other person who requested a copy before issuance of the order, addressed to their last known address.

**1.6.3 Stop work orders.** The code official may issue a stop work order whenever any work is being done without a permit, contrary to the provisions of this code, contrary to a permit issued by the code official, or in the event of dangerous or unsafe conditions related to equipment, construction, or demolition of boilers or pressure vessels.

A. Violation identified. The stop work order shall identify the violation or unsafe condition and may prohibit work or other activity on the site.

B. Serving the stop work order. The code official shall serve the stop work order by posting it on the premises in a conspicuous place at the site. If posting is not physically possible, the stop work order may be served by personal service or by regular first-class mail to the last known address of the person doing or causing the work to be done, the property owner, or the holder of a permit if the work is being stopped on a permit. For purposes of this section, service is complete at the time of posting or personal service or, if mailed, three days after the date of mailing. When the last day of the period so computed is a Saturday, Sunday, or City holiday, the period runs until 5 p.m. on the next business day.

C. Stop work order effective date. Stop work orders are effective when posted, or if posting is not physically possible, when one of the persons identified in Section 1.6.2(B) is served.

D. Work after stop work order. It is unlawful for any person to engage in work or to cause work to continue until authorization from the code official is received.

E. Administrative review of stop work orders. Any person aggrieved by a stop work order may obtain a review of the order by delivering to the code official a written request for review within two business days of the date of service of the stop work order.

1. Review procedure. The review shall occur within two business days after receipt by the code official of the request for review unless otherwise agreed by the person making the request. Any person affected by the stop work order may submit additional information to the code official for consideration as part of the review at any time prior to the review. The review will be made by the code official, who will review all additional information received and may also request a site visit.

2. Decision. After the review, the code official may:

- a. Sustain the stop work order;
- b. Withdraw the stop work order;
- c. Modify the stop work order; or
- d. Continue the review to a date certain.

3. Issuing order. The code official shall issue an order containing the decision within two business days after the review is completed and shall cause the order to be sent by regular first-class mail to the person or persons requesting the review, any person on whom the stop work order was served, and any other person who requested a copy before issuance of the order, addressed to their last known address.

**1.6.4 Authority to disconnect utilities in emergencies.** The code official has the authority to:

A. Disconnect fuel-gas utility service or energy supplied to a building, structure, premises, or equipment regulated by this code in cases of emergency when necessary to eliminate an immediate hazard to life or property.

B. Enter any building or premises to disconnect utility service. Whenever possible the code official shall notify the serving utility, owner, and occupant of the building, structure, or premises of the decision to disconnect prior to taking such action, and shall notify the serving utility, owner, and occupant of the building, structure, or premises in writing of such disconnection immediately after the disconnection.

**1.6.5 Reconnection.** Until the code official authorizes reconnection of equipment, it is a violation to:

- 1) Make connections from an energy, fuel, or power supply or supply energy or fuel to any equipment regulated by this code that is disconnected or ordered to be disconnected by the code official; and
- 2) Use the equipment ordered to be disconnected, until the code official authorizes the reconnection and use of such equipment.

**1.6.6 Authority to condemn equipment.** Whenever the code official determines that any equipment or portion thereof regulated by this code is hazardous to life, health, or property, the code official shall order in writing that such equipment be disconnected, removed, or restored to a safe or sanitary condition. The written notice shall fix a date certain for compliance with such order. It is a violation for any person to use or maintain defective equipment after receiving such notice. When any equipment or installation is to be disconnected, the code official shall give written notice of such disconnection and causes therefor within 24 hours to the serving utility, the owner, and the occupant of the building, structure, or premises. When any equipment is maintained in violation of this code, and in violation of a notice issued pursuant to the provisions of this section, the code official shall institute any appropriate action to prevent, restrain, correct, or abate the violation.

**1.6.7 Emergency order.** Whenever the code official finds that any equipment regulated by this code is so unsafe as to constitute an imminent hazard to life or limb, the code official may issue an emergency order. The emergency order may,

- 1) direct that the equipment be restored to a safe condition by a date certain;
- 2) require that the building, structure, or premises, or portion thereof, containing the equipment be vacated within a reasonable time to be specified in the order, or in the case of extreme danger, the order may specify immediate vacation of the building, structure, or premises, or portion thereof; or
- 3) authorize immediate disconnection of the utilities or energy source.

A. Service of emergency order. The emergency order shall be posted on the premises or personally served to the owner of the building or premises or any person responsible for the condition. The order shall specify the time for compliance.

B. Effect of emergency order. No person may occupy a building, structure, or premises, or portion thereof, after the date on which the building is required to be vacated until the building, structure, or premises, or portion thereof, is restored to a safe condition as required by the order and this code. It is a violation for any person to fail to comply with an emergency order issued by the code official. When any equipment is operated in violation of this code, or in violation of an order issued pursuant to the provisions of this section, the code official may begin an action to prevent, restrain, correct, or abate the violation.

**1.6.8 Hazard correction order.** Whenever the code official finds that unsafe equipment exists, the code official may issue a hazard correction order. The order shall:

- 1) state the conditions causing the equipment to be unsafe,

2) direct the owner or other persons responsible for the unsafe equipment to correct the condition, and

3) give a date certain for completing the required corrections. In lieu of correction, the owner may submit a report or analysis of the conditions to the code official establishing that the equipment is, in fact, safe. The code official may require that the report or analysis be prepared by a licensed engineer; the code official may accept the report as adequate or may reject the report as insufficient.

A. Service of hazard correction order. The order shall be served upon the owner, agent, or other responsible person by personal service or regular first-class mail addressed to the last known address of such person, or if no address is available after reasonable inquiry, the order may be posted in a conspicuous place on the premises. The order may also be posted on the premises if it is also being served by personal service or first-class mail.

B. Effect of hazard correction order. It is a violation for any person to fail to comply with a hazard correction order as specified in this subsection.

**1.6.9 Recording.** The code official may record a copy of any order or notice with the Department of Executive Services of King County.

**1.6.10 Civil penalties.** Any person violating or failing to comply with the provisions of this code is subject to a cumulative civil penalty in an amount not to exceed \$500 per day for each violation from the date the violation occurs or begins until compliance is achieved. In cases where the code official has issued a notice of violation, the violation will be deemed to begin, for purposes of determining the number of days of violation, on the date compliance is required by the notice of violation.

A. Enforcement in Municipal Court. Civil actions to enforce Section 22.450.010 of the Seattle Municipal Code (SMC) shall be brought exclusively in Seattle Municipal Court, except as otherwise required by law or court rule. In any civil action for a penalty, the City has the burden of proving by a preponderance of the evidence that a violation exists or existed. The issuance of a notice of violation or of an order following review by the code official is not itself evidence that a violation exists.

B. Judicial review. Because civil actions to enforce Section 22.450.010 of the SMC must be brought exclusively in Seattle Municipal Court pursuant to subsection 1.6.10.A, orders of the code official, including notices of violation issued under this chapter, are not subject to judicial review pursuant to chapter 36.70C Revised Code of Washington (RCW), Judicial Review of Land Use Decisions.

C. Appeal to Superior Court. Final decisions of the Seattle Municipal Court on enforcement actions authorized by Section 22.450.010 of the SMC and this code may be appealed pursuant to the Rules for Appeal of Decisions of Courts of Limited Jurisdiction.

**1.6.11 Alternative criminal penalty.** Anyone who violates or fails to comply with any notice of violation or order issued by the code official pursuant to this code or who removes, mutilates, destroys, or conceals a notice or order issued or posted by the code official shall, upon conviction thereof, be punished by a fine of not more than \$5,000 or by imprisonment for not more than 364 days, or by both fines and imprisonment for each separate violation. If the violation

continues to exist, each day the violation or failure to comply is continued shall constitute a separate offense.

**1.6.12 Additional Relief.** The code official may seek legal or equitable relief to enjoin any acts or practices and abate any condition when necessary to achieve compliance.

**1.6.13 Administrative review by the code official.** Prior to issuance of the boiler or pressure vessel permit, applicants may request administrative review by the code official of decisions or actions pertaining to the administration and enforcement of this code. Requests shall be addressed to the code official.

**1.6.14 Construction Codes Advisory Board (CCAB) Review.** After completion of an administrative review by the code official, and prior to issuance of the boiler or pressure vessel permit, applicants may request a review of the code official's decisions or actions pertaining to the application and interpretation of this code by the Construction Codes Advisory Board. The review will be performed by three or more members of the Construction Codes Advisory Board, chosen by the board chair. The chair shall consider the subject of the review and members' expertise when selecting members to conduct a review. The decision of the CCAB committee is advisory only. The final decision is made by the code official.

**Exception:** Stop work orders, notices of violations and revocations of permits shall not be subject of a Construction Codes Advisory Board review.

## **1.7 Existing Installations.**

**1.7.1 Existing boilers and pressure vessels.** Boilers and pressure vessels lawfully in existence at the time of the adoption of this code may continue in use at the location approved in the original permit. The systems may be maintained or repaired, converted to another type of fuel, or have components replaced if the use, maintenance, repair, conversion of fuel, or component replacement is done in accordance with the original code of construction and/or installation requirements when approved by the code official.

**1.7.2 Maintenance of existing installations.** All boilers and pressure vessels, materials and appurtenances, and parts, both existing and new, shall be maintained in proper operating condition in accordance with the original design and in a safe and hazard-free condition. All devices or safeguards required by the Seattle Boiler and Pressure Vessel Code shall be maintained in conformance with the code edition in effect when the system was installed, and boilers and pressure vessels shall be maintained in accordance with the manufacturer's instructions or nationally recognized standards. The owner or the owner's designated agent is responsible for maintenance of boilers and pressure vessels and auxiliary equipment. To determine compliance with this subsection, the code official may require a boiler or pressure vessel or equipment to be inspected or re-inspected.

**Exception:** The code official may modify the requirements of this section where all or a portion of the building is unoccupied.

**1.7.3 Changes in existing building or occupancy.** Existing boilers and pressure vessels that are a part of a building or structure housing a vessel undergoing a change in use or occupancy, as defined in the International Building Code, shall comply with all requirements of this code that are applicable to the new use or occupancy. If the use of the boiler or pressure vessel changes, then a new permit may be required, and the equipment shall comply with all requirements of this code.

**1.7.4 Landmarks.** The code official may modify the specific requirements of this code as it applies to landmarks and require in lieu thereof alternate requirements that, in the opinion of the code official, will result in a reasonable degree of safety to the public and the occupants of those buildings.

**1.8 Alternative materials, designs, and methods of construction.** This code does not prevent the use of any material, alternative design, or method of construction not specifically allowed or prohibited by this code, provided the alternate is approved and its use is authorized by the code official. The code official may approve an alternative if the proposed alternative complies with the intent of this code and that the alternative, when considered together with other safety features of the building or other relevant circumstances, provides at least an equivalent level of strength, effectiveness, fire resistance, durability, sanitation, and safety. The code official may require that sufficient evidence or proof be submitted to reasonably substantiate any claims regarding the use or suitability of the alternative. Acceptance of a Construction Code Advisory Board recommendation may be considered sufficient evidence by the code official to approve the alternative material, design, or method of construction. The code official may, but is not required to, record the approval of alternatives and any relevant information in the files of the code official or on the approved permit plans.

**1.9 Modifications.** The code official may modify the requirements of this code for individual cases provided:

- 1) There are practical difficulties in complying with the requirements of this code;
- 2) The modification is in conformity with the intent and purpose of this code; and
- 3) The modification provides a reasonable level of strength, effectiveness, fire resistance, durability, sanitation, and safety when considered together with other safety features of the building or other relevant circumstances. The code official may, but is not required to, record the approval of modifications and any relevant information in the files of the code official or on the approved set of construction documents.

**1.10 Tests.** If there is insufficient evidence of compliance with the requirements of this code, or evidence that a material or method does not conform to the requirements of this code, the code official may require that tests, as proof of compliance, be made at no expense to the City. Test methods shall be those specified in this code or by other recognized test standards. If there are no recognized and accepted test methods for the proposed alternative or modification, the code official shall determine the test procedures. All tests shall be made by an agency approved

by the code official. The agency shall provide a report of tests or examination results, and those results shall be retained by the code official for the period required for retention of public records.

## Section 2 – Definitions

**2.1 Scope.** The following words and terms shall, for the purposes of this code, have the meanings given in this section.

**2.2 Interchangeability.** Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural the singular.

**2.3 Terms defined in other codes.** Terms used but not defined in this code but defined in the *International Building Code*, *International Fire Code*, *Seattle Electrical Code*, *International Fuel Gas Code*, *Uniform Plumbing Code*, or the American Society of Mechanical Engineers (ASME) Standard CSD-1 Controls and Safety Devices for Automatically Fired Boilers shall be used. When a definition is found here and in ASME CSD-1, the definition given in this code shall govern.

**2.4 Terms not defined.** When a definition is not found below, the definitions of terms found in the codes and standards listed in Section 3.1 of this code shall govern.

**“A” OCCUPANCIES** are places of public assembly. Details can be found in Seattle Building Code Chapter 3.

**ACCESSIBLE** means having access to and includes the removal of an access panel, door, or similar obstruction designed for removal.

**ACCESSIBLE, READILY** means capable of being reached safely and quickly for operation, repair, or inspection without climbing over or removing obstacles, or resorting to the use of portable access equipment.

**ALTERATION** means a change in the item described on the original Manufacturer’s Data Report which affects the pressure containing capability of the pressure-retaining item.

**APPLIANCE** means a device which utilizes fuel or other forms of energy to produce light, heat, power, refrigeration or air conditioning, including vented decorative appliances.

**APPROVED** means accepted by the code official.

**APPROVED AGENCY** means an agency approved by the code official that is regularly engaged in conducting tests, examinations, or furnishing inspection services.

**ASME** is the acronym for American Society of Mechanical Engineers.

**ATTENDANT** means the person in charge of the operation of a boiler or unfired pressure vessel.

**AUTOMATIC CERTIFICATION PERMIT** means a permit used to modify the licensed attendance requirements for a specific boiler. (See Steam Engineer and Boiler Operator License Law, Seattle Municipal Code Chapter 6.420.)

**“B” OCCUPANCIES** are business uses, such as offices. Details can be found in Seattle Building Code Chapter 3.

**BOILER** means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum by the direct application of heat, including fired units for heating or vaporizing liquids other than water where these systems are complete within themselves.

**BOILER ROOM** means any room primarily used to house a boiler.

**BOILER, CERTIFIED AS AUTOMATIC** means a boiler that complies with Section 4.25 of this code, has an automatic certification permit that passed final inspection and is used to modify the licensed attendant requirements for a specific boiler. (See “Steam Engineer and Boiler Operator License Law”, Seattle Municipal Code Chapter 6.420).

**BOILER, CERTIFIED AS MONITORED** means a boiler that complies with Section 4.26 of this code and is used to modify the licensed attendant requirements for a specific boiler. (See “Steam Engineer and Boiler Operator License Law”, Seattle Municipal Code Chapter 6.420.)

**BOILER, HOT-WATER SUPPLY** means a listed potable water boiler, exceeding the limitations of a potable hot water heater, but that does not exceed a pressure of 160 psi (1100 kPa) or a temperature of 250 degrees F (121 degrees C), that provides hot water to be used externally to itself.

**BOILER, LOW-PRESSURE HOT-WATER-HEATING** means a boiler that circulates hot water for heating purposes at pressures not exceeding 160 pounds per square inch (1100 kPa) and at temperatures not exceeding 250 degrees F (121 degrees C), and the water is then typically returned to the boiler.

**BOILER, LOW-PRESSURE STEAM-HEATING** means a boiler furnishing steam for heating purposes at pressures not exceeding 15 pounds per square inch (103 kPa).

**BOILER, POWER HOT-WATER (HIGH-TEMPERATURE WATER BOILER)** means a boiler used for heating water or liquid to a pressure exceeding 160 psi (1100 kPa) or to a temperature exceeding 250 degrees F (121 degrees C).

**BOILER, POWER** means a boiler that generates steam or vapor at pressures exceeding 15 psi.

**BOILER, RENTAL** means any type of boiler that is owned by an entity for the purpose of renting to other entities for temporary or long-term usage.

**BOILER, USED** means any boiler installed in Seattle that was in previous service.

**BUILDING CODE** means the Seattle Building Code.

**BURNER** means a device that conveys fuel and air or steam into the combustion chamber of a boiler to cause and maintain stable combustion.

**CHIMNEY** means a primarily vertical structure containing one or more flues, for the purpose of carrying gaseous products of combustion and air from a fuel-burning appliance to the outside atmosphere.

**CODE OFFICIAL** is the Director of the Seattle Department of Construction and Inspections and the Director’s designees, which include the Chief Pressure Systems Inspector and other authorized representatives.

**COMBUSTION AIR** means the air necessary for complete combustion of a fuel, including theoretical air and excess air.

**DEPARTMENT** means the Seattle Department of Construction and Inspections.

**DRAFT HOOD** means a nonadjustable device built into an appliance or made a part of the vent connector from an appliance, which is designed to:

- 1) Provide for the ready escape of the flue gases in the event of no draft, backdraft or stoppage beyond the draft hood;
- 2) Prevent a backdraft from entering the appliance; and
- 3) Neutralize the effect of stack action of the chimney or gas vent upon the operation of the appliance.

**DUCT** means a tube or conduit for conveying air. The air passages of listed self-contained systems are not to be construed as air ducts.

**“E” OCCUPANCIES** are educational facilities. Details can be found in Seattle Building Code Chapter 3.

**ELECTRICAL CODE** is the Seattle Electrical Code.

**EXTERNAL INSPECTION** means an inspection of the outside and fireside of the boiler, including safety controls.

**“F” OCCUPANCIES** are factory and industrial uses. Details can be found in Seattle Building Code Chapter 3.

**FIRE CODE** is the Seattle Fire Code.

**FUEL TRAIN** means a series of valves, regulators, and controls, between the burner and the source of fuel, that regulates and controls the flow of fuel to the burner.

**“H” OCCUPANCIES** are high hazard uses. Details can be found in Seattle Building Code Chapter 3.

**“I” OCCUPANCIES** are medical and institutional facilities. Details can be found in Seattle Building Code Chapter 3.

**INSPECTOR** means any of the inspector types defined by this code, who examine internal and external boiler and pressure vessel parts and surfaces and who test the function of operating controls and safety devices for correct operation.

**INSPECTOR, CHIEF** means the chief pressure systems inspector appointed by the code official.

**INSPECTOR, CITY** means an inspector employed by the Department.

**INSPECTOR, INSURANCE** means an inspector employed by an authorized insurance company as defined in this code.

**INSURANCE COMPANY, AUTHORIZED** means an insurance company that has been authorized by the State of Washington to write and provide insurance coverage for loss of boilers or unfired pressure vessels.

**INTERNAL INSPECTION** means an inspection requiring that the water side of the boiler be looked at visually.

**JACKETED STEAM KETTLE** means a pressure vessel, with inner and outer walls, that is subject to steam pressure and is used to boil or heat liquids or to cook food.

**LETHAL SUBSTANCE** means a poisonous gas or liquid that in a very small amount is dangerous to life when inhaled or absorbed through the skin or membranes. It is the responsibility of the user or the user’s designated agent to determine and declare if contents are lethal substances.

**LANDMARK** means a building or structure that is subject to a requirement to obtain a certificate of approval from the City Landmarks Preservation Board before altering or making significant changes to specific features or characteristics, that has been nominated for designation and the City Landmarks Preservation Board has not issued a determination regarding designation, that has been designated for preservation by the City Landmarks Preservation Board, that has been designated for preservation by the State of Washington, that has been listed or determined

eligible to be listed in the National Register of Historic Places, or that is located in a landmark or special review district subject to a requirement to obtain a certificate of approval before making a change to the external appearance of a structure.

**LICENSED OPERATOR** means a person licensed to operate boilers in accordance with the Seattle Steam Engineer and Boiler Operator License Law, SMC Chapter 6.420.

**LISTED** means that equipment, materials, products, or services are included in a list published by an organization acceptable to the code official. The listing organization provides an evaluation of products or services by performing periodic inspection during production of equipment or materials, or periodic evaluation of services. The resulting listing states either that the equipment, material, product, or service meets identified standards, or was tested and found suitable for use in a specified manner.

**“M” OCCUPANCIES** are retail and wholesale facilities. Details can be found in Seattle Building Code Chapter 3.

**MANUALLY OPERATED (FIRED) BOILER** means a boiler that requires constant attendance by an operator with no duties other than the proper and safe operation of the boiler, its related equipment when the boiler is in operation.

**PERSON** means an individual, receiver, administrator, executor, assignee, trustee in bankruptcy, trust, estate, firm, partnership, joint venture, club, company, joint stock company, business trust, municipal corporation, political subdivision of the State of Washington, corporation, limited liability company, association, society, or any group of individuals acting as a unit, whether mutual, cooperative, fraternal, nonprofit, or otherwise, and the United States or any instrumentality thereof.

**PILOT** means a small burner that is used to light the main burner.

**PILOT, CONTINUOUS (also known as constant burning pilot)** means a pilot that burns without turndown during the entire time the boiler is in service, whether the main burner is firing or not.

**PILOT, INTERMITTENT** means a pilot that is automatically lighted each time there is a call for heat and burns during the entire period the main burner is firing.

**PILOT, INTERRUPTED** means a pilot that is automatically lighted each time there is a call for heat. The pilot fuel is cut off automatically once the main burner flame is ignited.

**PRESSURE VESSEL** means a closed unfired container under internal pressure.

**PRESSURE VESSEL, USED** means any pressure vessel that is installed in Seattle that was in service at a previous time.

**PURGE** means to blow air, fuel, water, or other foreign substances out of a container or confined space.

**“R” OCCUPANCIES** are residential facilities. Details can be found in Seattle Building Code Chapter 3.

**REPAIR** means the work necessary to restore pressure-retaining items to a safe and satisfactory operating condition.

**REPAIR ORGANIZATION** means an organization in possession of a valid “R” *Certificate of Authorization* issued by the National Board.

**“S” OCCUPANCIES** are storage facilities. Details can be found in Seattle Building Code Chapter 3.

**“U” OCCUPANCIES** are accessory utility facilities such as private garages and greenhouses. Details can be found in Seattle Building Code Chapter 3.

**VENT** means a pipe or other conduit composed of factory-made components, containing a passageway for conveying combustion products and air to the atmosphere, listed and labeled for use with a specific type or class of appliance.

**VENT CONNECTOR** means the pipe that connects an approved fuel-fired appliance to a vent.

**WATER HEATER, COMBINATION** means a potable hot water heater that is listed for the use of producing both space heat and potable hot water and includes only those appliances that do not exceed 210 degrees F (99 degrees C), maximum allowable working pressure (MAWP) of 160 psi (1103 kPa), volume of 120 gallons (454 L), or a heat input of 200,000 Btu/hr (58.6 kW). Appliances and equipment that exceed any one of these values are classified as boilers. The heat source for the equipment may be fired, electric, thermal, solar, or indirect.

**WATER HEATER, POOL** means a potable hot water heater that is listed for use of heating water for pools, spas, saunas, and similar equipment and only includes those appliances that do not exceed 210 degrees F (99 degrees C), maximum allowable working pressure (MAWP) of 160 psi (1103 kPa), volume of 120 gallons (454 L), or a heat input of 200,000 Btu/hr (58.6 kW). Appliances and equipment that exceed any one of these values are classified as boilers.

**WATER HEATER, POTABLE (FIRED, ELECTRIC, THERMAL, SOLAR, AND INDIRECT)** means any heating appliance or equipment that is listed for the use of heating potable water and supplies such water to the potable hot water distribution system, and includes only those appliances that do not exceed 210 degrees F (99 degrees C), maximum allowable working pressure (MAWP) of 160 psi (1103 kPa), volume of 120 gallons (454 L), or a heat input of 200,000 Btu/hr (58.6 kW). Appliances and equipment that exceed any one of these values are classified as boilers.

## Section 3 – Applicable Installation Codes, Listings, and Standards

**3.1 Required codes.** Boilers and pressure vessels installed within The City of Seattle shall conform to this code and the minimum manufacturing standards, including any addenda, in effect on the date of manufacture as listed in Section 3.1.1 below. Where differences occur between the requirements of this code and the codes and standards referenced in Sections 3.1.1.A through 3.1.1.E, the provisions of this code apply.

### 3.1.1 Applicable codes and standards.

- A. The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Sections I, III, IV, VIII, X, and PVHO-1.
- B. The American National Standards Institute ANSI B31.1.0 Power Piping Code.
- C. Boilers with burner fuel input ratings of 12,500,000 Btu/hour or more shall comply with the fuel train requirements set forth in NFPA 85.
- D. Appurtenances that are not within the scope of the ASME construction codes may be constructed to a nationally recognized standard of construction approved by the code official.
- E. Jacketed steam kettle vessels that are equal to or greater than 1 ½ cubic feet in volume (11.22 gallons capacity) shall be ASME code stamped.

**3.2 Listing.** Appurtenances, such as safety controls, operating controls, burner assemblies, and fuel trains, shall bear the mark of a recognized listing agency or the appropriate certifications as listed by the manufacturer. Appurtenances shall be installed and operated in accordance with the requirements of the listing or the manufacturer’s certification and written instructions. Electrical components and wiring shall bear the mark of a recognized listing agency and have a listing appropriate for the environment of the installation.

**3.3 Symbol of construction and registration.** Boilers and pressure vessels shall bear the appropriate symbol of construction required by the ASME Boiler and Pressure Vessel Code, and shall be registered with the National Board of Boiler and Pressure Vessel Inspectors.

**Exception:** Cast iron boilers and pressure vessels bearing the ASME UM stamp.

## Section 4 – Permits

**4.1 Permits required.** Except as otherwise specifically provided in this code, the installer shall obtain a boiler/pressure vessel permit from the code official prior to commencement of the following work:

1. Installation or replacement of new or used boilers and pressure vessels.
2. Installation of rental boilers.
3. Certification of boilers as Automatic.
4. Certification of boilers as Monitored.
5. Modification of existing control systems on boilers certified as Automatic or Monitored.
6. Replacement or modification of fuel burners, changing fuels, or adding different fuel combinations.
7. Repair or Alteration of boilers or pressure vessels.
8. Installation of pressure vessels containing lethal substances.
9. Potable water heaters that exceed any of the following limits, which are classified as boilers:
  - a. 200,000 BTU/Hr input
  - b. 120 Gallons capacity
  - c. 160 PSIG
  - d. 210 Degrees F.

**Informational Note:** Seattle Energy Code Section C403.1.4 restricts the use of electric resistance and fossil fuel-fired equipment for HVAC heating in most buildings, and Section C404.2.3 restricts the use of electric resistance and fossil fuel-fired service water heating equipment in Group R-1 and R-2 buildings.

**4.2 Exemption from permits.** The following boilers, pressure vessels, and other equipment do not require a boiler/pressure vessel permit from the code official:

1. Portable unfired pressure vessels that are inspected by the State of Washington as required by chapter 70.79 RCW;
2. Containers for liquefied petroleum gases regulated by the Seattle Fire Code;

3. Any boiler or pressure vessel subject to regular inspection by federal inspectors or licensed by a federal authority, such as the Department of Transportation (DOT);

4. Pressure vessels located in Groups B, F, H, M, R, S, and U Occupancies having a volume of 5 cubic feet or less and operated at pressures not exceeding 250 psi.

**Note:** Expansion tanks exempted for size shall conform to the requirements of ASME Section IV, HG-709 or HLW-809 applicable edition together with applicable addenda.

5. Water storage tanks with no air cushion and no energy or heat source;

6. Boilers and pressure vessels under the direct ownership and operation of the State of Washington that are inspected in accordance with Washington State boiler and pressure vessel rules (chapter 70.79 RCW) and have a current Washington State certificate to operate; and

7. Potable water heaters that do not exceed any of the following limits:

a. 200,000 BTU/Hr input

b. 120 Gallons capacity

c. 160 PSIG

d. 210 Degrees F.

**Note:** Potable water heaters require a plumbing permit issued from Public Health – Seattle and King County.

**4.3 Application for permit.** To obtain a permit, the installer shall first file an application in a format determined by the code official. Every application shall:

1. Identify and describe the work to be covered by the permit for which application is made.

2. Describe the land on which the proposed work is to be done by legal description, property address, or similar description that will readily identify and definitively locate the proposed building or work.

3. Be accompanied by construction documents and/or specifications in the standard ASME form (Manufacturers' Data Report) when required by the code official.

4. Be signed by the owner of the property or building, or the owner's authorized agent, who may be required to submit evidence to indicate such authority.

5. Include the names, addresses, and phone numbers of the boiler owner, general contractor, and any other contractor or contact persons.

6. Provide additional data and information, including but not limited to the manufacturer name and serial number, as may be required by the code official.

**4.4 Construction documents.** The code official may require that one or more sets of construction documents including plans, computations, and specifications be prepared and submitted to the City. Construction documents shall be submitted to the code official or designee at the time of the first boiler inspection. Nothing shall prevent the code official from requiring the submittal of construction documents prior to the issuance of the permit. Plans and specifications shall be drawn to a clearly indicated and commonly accepted scale in a format determined by the code official. The construction documents shall be sufficiently clear for electronic storage and shall show that the proposed installation conforms to the provisions

of this code and to the provisions of all applicable laws, ordinances, rules, regulations, and orders.

**4.5 Emergency repairs.** In the case of emergency, the installation or repair of any boiler or pressure vessel or auxiliary equipment may be made without first applying for a permit. The code official shall be given notice by email or voicemail of the work performed within 24 hours or one business day from the time when the emergency work was started. Permit applications shall be submitted within the later of 24 hours or one working day from the start of the emergency work or as directed by the code official.

**4.6 Application review and permit issuance.** The application shall be reviewed by the code official or designee. The application may be reviewed by other departments of the City to check compliance with the laws and ordinances under their jurisdiction.

**4.6.1 Issuance of permit.** The code official shall issue a permit to the applicant if the code official finds the following:

1. The work described in the application, and other construction documents when required by the code official prior to issuance, substantially conforms to the requirements of this code and other pertinent laws and ordinances;
2. The permit fees specified in Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees, commonly known as the Fee Subtitle, have been paid; and
3. The applicant has complied with all requirements to be performed prior to issuance of a permit for the work under other pertinent laws, ordinances, or regulations or included in a master use permit, or otherwise imposed by the code official. When the permit is issued, the applicant or the applicant's authorized agent becomes the permit holder.

**4.6.2 Compliance with approved construction documents.** When the code official issues a permit, the code official shall endorse the permit in writing or in electronic format and, where plans have been required, stamp the plans "APPROVED." Such approved plans and permit shall not be changed, modified, or altered without authorization from the code official, and all work shall be done in accordance with the approved construction documents and permit except as authorized by the code official during a field inspection to correct errors or omissions, or as authorized by Section 4.6.3.

**4.6.3 Revisions to the permit.** When changes to the approved work are made during construction, approval of the code official shall be obtained prior to execution. The boiler and pressure vessel inspector may approve minor changes for work not reducing the structural strength or fire and life safety of the structure or the integrity of the boiler or pressure vessel or auxiliary equipment. The inspector shall determine if it is necessary to revise the approved construction documents. If revised plans are required, changes shall be submitted to and approved by the code official, accompanied by fees specified in the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees, prior to occupancy. All changes shall conform to the requirements of this code and other pertinent laws and ordinances and other issued permits. Minor changes shall not incur additional fees if these changes do not (1) add to the

general scope of work; (2) change the basic design concept; (3) involve major relocation of equipment, ducts, or pipes; (4) substantially alter approved equipment size; or (5) require extensive re-review of the plans and specifications.

**4.6.4 Cancellation of permit applications.** Applications may be cancelled if no permit is issued by the earlier of the following: (1) 12 months following the date of application; or (2) 60 days after the date of written notice that the permit is ready to be issued. After cancellation, construction documents may be returned to the applicant or destroyed by the code official. The code official shall notify the applicant in writing at least 30 days before the application is cancelled. The notice shall specify a date by which a request for extension must be submitted to avoid cancellation. The date shall be at least two weeks prior to the date on which the application will be cancelled.

**4.7 Validity of permit.** The issuance or granting of a permit or approval of construction documents shall:

1. Not be construed to be a permit for, or an approval of, any violation of any provisions of this code or any other pertinent laws and ordinances.
2. Not prevent the code official from requiring correction of conditions found to be in violation of this code or other pertinent laws and ordinances of the City.
3. Not prevent the code official from requiring the correction of errors in the construction documents or from preventing building operations being carried on thereunder when in violation of this code or of other pertinent laws and ordinances of the City.
4. Not be construed to extend the period of time for which any such permit is issued or otherwise affect any period of time for compliance specified in any notice or order issued by the code official or other administrative authority requiring the correction of any such conditions.

**4.8 Permit Expiration.** Authority to do the work authorized by a permit expires 18 months from the date of issuance. An approved renewal extends the life of a permit for an additional 18 months from the prior expiration date. An approved reestablishment extends the duration of the permit for 18 months from the date the permit expired.

**Exceptions:**

1. Initial permits for major construction projects that require more than 18 months to complete may be issued for a period that provides reasonable time to complete the work, according to an approved construction schedule. The code official may authorize a permit expiration date not to exceed three years from the date of issuance.
2. The code official may issue permits that expire in less than 18 months if the code official determines a shorter period is appropriate to complete the work.

**4.9 Renewal of permits.** Permits may be renewed, and renewed permits may be further renewed by the code official, if the following conditions are met:

1. Application for renewal is made within the 30-day period immediately preceding the expiration date of the permit; and

2. The project has had an associated discretionary land use review and the land use approval has not expired; and
3. If the application for renewal is made more than 18 months after the date of mandatory compliance with a new or revised edition of this code, the permit shall not be renewed unless:
  - a. The code official determines that the permit complies, or is modified to comply with the Seattle Boiler and Pressure Vessel Code in effect on the date of application for renewal; or
  - b. The work authorized by the permit is substantially underway and progressing at a rate approved by the building official. “Substantially underway” means that normally required inspections have been approved for work such as foundations, framing, mechanical, and insulation and finish work is being completed on a continuing basis; or
  - c. Commencement or completion of the work authorized by the permit is delayed by litigation, appeals, strikes, or other causes related to the work authorized by the permit that are beyond the permit holder’s control.

**4.10 Reestablishment of expired permits.** A new permit is required to complete work if a permit has expired and was not renewed.

**Exception:** A permit that expired less than one year prior to the date of a request for reestablishment may be reestablished without the issuance of a new permit upon approval of the code official if it complies with Items 2 and 3 of Section 4.9. Once re-established, the permit will not be considered to have expired. The new expiration date of a re-established permit shall be determined in accordance with Section 4.8.

**4.11 Revocation of boiler and pressure vessel permits.** Whenever the code official determines there are grounds for revoking a permit, the code official may issue a notice of revocation. The notice of revocation shall identify the reason for the proposed revocation, including, but not limited to, the violations, the conditions violated, and any alleged false or misleading information provided.

**4.11.1 Standards for revocation.** The code official may revoke a permit if:

1. The code or the permit has been or is being violated and issuance of a notice of violation or stop work order has been or would be ineffective to secure compliance because of circumstances related to the violation; or
2. The permit was obtained with false or misleading information.

**4.11.2 Service of notice of revocation.** The notice of revocation shall be served upon the owner, agent, or other responsible person by personal service or regular first class mail addressed to the last known address of such person, or if no address is available after reasonable inquiry, the notice may be posted in a conspicuous place on the premises. The notice may also be posted if served by personal service or first-class mail.

**4.11.3 Effective date of revocation.** The code official shall identify in the notice of revocation a date certain on which the revocation will take effect. This date may be stayed pending complete review by the code official pursuant to Section 4.11.4.

**4.11.4 Review by the code official for notice of revocation.** Any person aggrieved by a notice of revocation may obtain a review by making a request in writing to the code official within three business days of the date of service of the notice of revocation. The review shall occur within five business days after receipt by the building official of the request for review. Any person affected by the notice of revocation may submit additional information to the building official for consideration as part of the review at any time prior to the review.

A. Review procedure. The review will be made by a representative of the code official who will review all additional information received and may also request a site visit. After the review, the code official may:

1. Sustain the notice of revocation and affirm or modify the date the revocation will take effect;
2. Withdraw the notice of revocation;
3. Modify the notice of revocation and affirm or modify the date the revocation will take effect; or
4. Continue the review to a date certain.

B. Order of revocation of permit. The code official shall issue an order containing the decision within ten days after the review is completed and shall cause the same to be sent by regular first-class mail to the person or persons requesting the review, any other person on whom the notice of revocation was served, and any other person who requested a copy before issuance of the order. The order of the building official is the final order of the City, and the City and all parties shall be bound by the order.

**4.12 Fees.** A fee for each boiler and pressure vessel permit and for other activities related to the enforcement of this code shall be paid as set forth in the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees. The permit fee covers the cost of the inspection to verify that the installation has been completed in accordance with the permit.

### **4.13 Inspections: General.**

**4.13.1 Inspection of work.** Boilers and pressure vessels for which a permit is required by this code shall be subject to inspection by the code official.

**4.13.2 Approval in error.** Approval resulting from an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the City. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the City shall not be valid.

**4.13.3 Inspector qualifications.** City-employed inspectors holding a current inspector's commission with the National Board of Boiler and Pressure Vessel Inspectors shall conduct the required inspections and use the current edition of the National Board Inspection Code (NBIC),

Part 1, as a guide for conducting the inspection. When differences occur between the requirements of this code and other codes and standards, this code shall apply.

**Informational Note:** The acronym (NBIC) stands for **National Board Inspection Code**. The NBIC provides standards for the installation, inspection, and repair and/or alteration of boilers, pressure vessels, and pressure relief devices.

**4.13.4 Responsibility for inspection requests.** It is the duty of the installer to notify the code official that work requiring inspection as specified in this section is ready for inspection.

**4.13.5 Access for inspection.** The permit holder and the person requesting any inspections required by this code shall provide access to and means for proper inspection of such work. The work shall remain accessible and exposed for inspection purposes. Neither the code official nor the City shall be liable for expenses incurred in the removal or replacement of any material impeding the access necessary to perform required inspections.

**4.13.6 Posting permit.** The permit holder or permit holder's agent shall post the permit in a conspicuous place on the premises as directed by the code official.

**4.13.7 Approvals required.** No work shall be done on any part of the building or structure beyond the point indicated in each successive inspection without first obtaining the written approval of the code official.

A. Effect of approval. Approval resulting from an inspection is not approval of any violation of the provisions of this code or of other pertinent laws and ordinances of the City. Inspections presuming to give authority to violate or cancel the provisions of this code or of other pertinent laws and ordinances of the City are not valid.

**4.13.8 Testing of equipment and systems.** The code official may require testing of equipment and systems as part of permit inspections.

**4.13.9 Inspections required.** The installation of boilers and pressure vessels must be inspected. The following inspections may be required by the code official:

A. Special investigation inspection. If work that requires a permit or approval is commenced or performed prior to making formal application and receiving the code official's permission to proceed, the code official may make a special investigation inspection before a permit is issued for the work. If a special investigation is made, a special investigation fee may be assessed in accordance with the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees.

B. Pre-installation inspection. When the owner or the owner's authorized representative requests inspection of a boiler prior to its installation, the code official shall make the inspection. Any additional inspection outside the scope of the permit may be subject to additional fees in accordance with Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees.

C. Final Inspection. When the installation of a boiler or pressure vessel, its auxiliary equipment or related system, is complete, a final inspection shall be performed approving the boiler, pressure vessel, auxiliary equipment or related system as ready for service.

D. Reinspection. The code official may require a reinspection if:

1. Work for which inspection is requested is not complete;
2. Required corrections called for are not made;
3. The permit record is not properly posted on the work site;
4. The approved plans are not readily available to the inspector;
5. Deviations from construction documents that require the approval of the code official have been made without proper approval;
6. Access is not provided on the date requested for the inspection; or
7. Other unforeseen hazards identified by the code official.

**4.13.10 Reinspection fees.** The code official may assess a reinspection fee as set forth in the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees, for reinspection. In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees are paid.

#### **4.14 Requirements for new installations.**

A. On-site. The code official shall require:

1. Boiler installations to have equipment controls set, adjusted, and tested by the installing contractor upon completion.
2. The following documentation to be on site and available to the inspector upon request:
  - (a) the Department issued permit, (b) National Board or ASME Data Report(s), and (c) manufacturer's installation and operation instructions.
3. Tests deemed necessary to determine that the installation complies with the provisions of this code. Such tests shall be made in the presence of the code official.
4. Access to, and the means for, safe inspection of the installation.

**4.15 Testing rental and used boilers.** Rental boilers and used boilers are subject to hydrostatic testing, non-destructive testing, or other special testing as may be required by the code official.

**4.16 Combustion air.** Combustion air shall be provided in accordance with Chapter 7 of the Seattle Mechanical Code.

**4.17 Venting.** Venting of combustion byproducts shall be in accordance with Chapter 8 of the Seattle Mechanical Code. Gas-fired appliances shall be vented in accordance with Chapter 5 of the Seattle Fuel Gas Code. Stack dampers on boilers fired with oil or solid fuel shall not close off more than 80 percent of the stack area when closed. Operative dampers shall not be placed within any stack, flue, or vent of a gas-fired boiler.

**Exception:** Automatic boilers with pre-purge, automatic draft control, and interlock.

**4.18 Controls, safety devices, and instrumentation.** Required electrical, mechanical, safety, and operating controls shall carry approval of an approved testing agency.

Electrical controls shall be of such design and construction as to be suitable for installation in the environment in which they are located.

**4.18.1 Valves.** No valve shall be placed between a safety device and the boiler or pressure vessel.

**4.18.2 Burners.**

A. All burners shall be listed by a nationally recognized testing agency. Burners that are integral parts of boilers shall be listed as part of the overall boiler/burner assembly.

B. Burners capable of burning two or more fuels and installed on or after June 1, 1987, shall be equipped with a fuel selector switch designed and constructed to prevent switching from one fuel to a different fuel without a physical stop in the center/off position.

**4.18.3 Gauges.** The following gauges are required and shall be kept in good working condition.

A. All steam boilers shall be provided with a pressure gauge and a water level glass.

B. All water boilers shall be provided with a pressure gauge and a temperature indicator.

**4.18.4 Pressure and temperature relief.**

A. Overpressure protection. All boilers and pressure vessels shall be protected from excess pressure as specified in the applicable ASME Code Section or recognized standard. Pressure relief devices shall be installed per the applicable ASME Code Section or the manufacturer's requirements, subject to the following additional requirements:

1. Safety relief valves. Safety relief valves on boilers and pressure vessels shall be sized in accordance with the manufacturer's instructions or as approved by the code official.

2. Discharged liquid. The discharge from liquid relief valves shall be piped to within 18 inches of the floor to an open receptacle or floor drain. If the discharged liquid has the potential to exceed 140°F then the discharge shall be cooled prior to entering a drainage system in accordance with the requirements found in the Chapter 8 of the Seattle Plumbing Code.

3. Safety valve discharge. Safety valve discharge from boilers and pressure vessels containing steam shall be directed upward to a minimum of 6 feet above the boiler room floor or horizontally to an inaccessible area of the boiler room. If the discharge from safety valves would result in a hazardous discharge of steam inside the boiler room, or if the discharge of safety valves on boilers exceeds the capacity of 1,000 pounds of steam per hour, the steam discharge shall be extended outside the boiler room to a safe location. No valve shall be placed on the discharge pipe between the safety relief valve and the atmosphere.

**4.18.5 Emergency shutdown switch.** Automatically fired boilers exceeding 400,000 BTU/Hr input, or 400,000 BTU/Hr combined capacity in multiple boiler installations, including electric boilers exceeding 117KW, shall have an emergency shut down switch installed outside the boiler room, or in another location approved by the code official. If there is more than one door to the boiler room, there shall be a switch located at each door. The switch shall allow shutdown of all boilers in the boiler room without having to enter the boiler room. The emergency shutdown switch shall be suitable for the intended use and marked for easy identification.

#### **4.18.6 Low-water cutoff or flow-sensing devices.**

A. For water boilers. Water boilers shall be equipped with a manual reset type low-water cutoff device.

1. Low-water cutoff devices shall be mounted so that activation of the device does not damage the boiler or reset the device.
2. Low-water cutoff devices shall be capable of being tested without draining the boiler system.
3. Manually operated and power-actuated isolation valves between the low-water cutoff and the boiler are prohibited.
4. Delay functions incorporated in any low-water cut-off device requires pre-approval by the code official. Delay functions shall be installed in accordance with the manufacturer's instructions.
5. In installations where two or more low-water cutoffs are installed, the cutoffs shall be separately piped where feasible.

B. For forced circulation boilers. Boilers that require forced circulation to prevent overheating shall have a flow-sensing device installed.

1. Flow-sensing devices shall be mounted so that activation of the device does not damage the boiler or reset the device.
2. Flow sensing devices shall be testable without draining the boiler system.
3. Delay functions incorporated in any flow-sensing device require pre-approval by the code official. Approved delay functions shall be installed in accordance with the manufacturer's instructions.

C. For steam boilers. Every steam boiler shall be equipped with two low-water cutoffs. The lower of the two cutoffs shall be equipped with a manual reset device. This device shall be so located as to automatically cut off the fuel supply before the surface of the water falls below the lowest visible part of the water gauge glass.

1. The manual reset device shall be mounted so that activation of the device does not damage the boiler or reset the device.
2. The manual reset device shall be testable without draining the boiler system.
3. Manually operated and power-actuated isolation valves between the low-water cutoff and the boiler are prohibited.
4. Delay functions incorporated in any low-water cut-off device requires pre-approval by the code official. Approved delay functions shall be installed in accordance with the manufacturer's instructions.
5. In installations where two or more low-water cutoffs are installed, the cutoffs shall be separately piped where feasible.

#### **Exceptions to Items A through C:**

1. Manually fired water and steam boilers.
2. Hot water supply boilers, such as those bearing the ASME "HLW" stamp, that are directly connected to and pressurized by the public water supply.

#### **4.18.7 Additional required devices.**

A. Temperature control. Water and liquid boilers shall be equipped with two temperature controls, one of which shall have a manual reset device.

B. Pressure control. Steam and vapor boilers shall be equipped with two pressure controls, one of which shall have a manual reset device.

C. Automatic water feeding devices. All steam, vapor, and water boilers shall be equipped with an automatic water feeding device. For steam boilers and boilers having an operating water level, the water feeder shall be controlled by the actual water level in the boiler.

**Exception:** Manually operated boilers that have a qualified person in constant attendance of the boiler while it is in operation to ensure adequate water feed.

D. Blow-off tank. All steam boilers shall be equipped with a blow-off tank fabricated in accordance with the National Board of Boiler and Pressure Vessel Inspectors Blow-off Equipment Standard NB-27. Blow-off tanks shall collect and temper water and steam discharged from safety relief valves and, as applicable, from blow-off and blowdown effluent and low-water fuel cut-off drains. Effluent shall not exceed 140 degrees F prior to entering building drains. (See Seattle Plumbing Code).

**Exception:** An alternative means for safe discharge may be approved by the code official.

E. Expansion tanks. All closed hot water heating systems shall be provided with an expansion tank. Expansion tanks shall be fabricated to ASME Section IV Standard HG-709. Expansion tanks shall be sized appropriately and securely fastened to supports that are adequate to support twice the weight of the tank filled with water without placing strain on connecting piping.

F. Mechanically fired boilers which require manual ignition or lighting of the burner shall have a manual reset device to prevent automatic recycling in the event of any shut down.

G. Energy management systems. Energy management systems shall not have the ability to override safety devices required by this code. Such systems may only connect to a boiler control system at points provided by the manufacturer for such use.

#### **4.19 Location of boilers and pressure vessels.**

**4.19.1 Clearance requirements.** When boilers and pressure vessels are installed or replaced, clearance shall be provided to allow access for safe operation, inspection, maintenance, and repair. Passageways around all sides of boilers and pressure vessels shall have an unobstructed width of not less than 18 inches. Clearance for repair and cleaning may be provided through a door or access panel into another area, provided the opening is of sufficient size.

**Exception:** When approved by the code official, boilers and pressure vessels may be installed with a side clearance of less than 18 inches provided that the lesser clearance does not inhibit inspection, maintenance, and repair or violate the terms of the listing or the manufacturer's installation instructions.

A. Power boilers having a steam generating capacity in excess of 5,000 pounds per hour or having a heating surface in excess of 1,000 square feet or inputs in excess of 5,000,000 Btu/h shall have a minimum clearance of 7 feet from the top of the boiler to the ceiling.

B. Steam heating boilers and hot water heating boilers which exceed one of the following limits: 5,000,000 Btu/h input, 5,000 pounds steam-per-hour capacity, or 1,000 square-foot heating surface; power boilers which do not exceed one of the following limits: 5,000,000 Btu/h input, 5,000 pounds steam-per-hour capacity, or 1,000-square-foot heating surface; and all boilers with

manholes on top of the boiler, except those described in Items A and C, shall have a minimum clearance of 3 feet from the top of the boiler to the ceiling.

C. Package boilers, steam heating boilers, and hot-water heating boilers with no manhole on top of shell and not exceeding one of the limits contained in subsection 4.19.1.B shall have a minimum clearance of 2 feet from the ceiling.

D. Manhole openings shall have a minimum of 5 feet clearance from any outside obstruction.

**4.19.2 Underground installations.** Boilers and pressure vessels installed underground shall be enclosed in a concrete or masonry pit. A covered pit shall be equipped with a removable cover so that adequate inspection can be made. Requirements for clearances shall be the same as Section 4.19.1.

**4.19.3 Boiler rooms.**

A. Construction. Boiler rooms shall be constructed in accordance with the current edition of the Seattle Building or Residential Code. Equipment shall be mounted to adequately support the vessel and its contents and keep the equipment level and safely anchored to prevent unwanted movement and damage due to vibration. Floors shall be of noncombustible materials or listed as appropriate for the equipment being mounted. Floors shall have an adequate drain system or legal method of catching and holding liquid wastes incidental to cleaning, recharging, or discharging of safety relief valves.

B. Access platform. Platforms to conduct maintenance and inspection shall be provided to allow safe access and egress to each boiler or pressure vessel.

**4.19.4 Garage or warehouse locations.** Boilers and pressure vessels installed in garages, warehouses, or other locations where damage from moving vehicles is possible shall be protected with barriers or shall be elevated or located outside the path of vehicles. Boilers, if fuel-fired and installed in garages, shall be at least 18 inches above the floor level. (See Seattle Mechanical Code Section 304.)

**Exception:** Boilers and pressure vessels installed within a garage may be enclosed in a separate approved compartment having access only from outside the garage if the required combustion air is taken from and discharged to the exterior of the garage.

**4.20 Pressure reducing valves.**

**4.20.1. Limiting equipment pressure.** All the equipment downstream of the boiler or pressure vessel shall:

A. Meet the pressure requirements for the maximum allowable working pressure (MAWP) of the boiler or pressure vessel; or

B. Have a pressure reducing system that includes:

1. Safety relief valves. The low-pressure side of the pressure reducing valve shall be protected by one or more safety valves having adequate volume capacity and a set pressure not to exceed the MAWP of equipment or piping installed downstream of the pressure reducing valve.

2. Pressure gauges. Pressure gauges shall be installed on the high and low pressure sides of the pressure reducing valve.

3. Venting. Proper protection shall be provided to prevent injury or damage caused by the discharge of the safety relief valves when vented to the atmosphere.
4. Bypass valves. The use of a hand-controlled bypass around the reducing valves is allowed. The capacity of the bypass valve shall not exceed the capacity of the reducing valve.

## **4.21 Fuel piping**

**4.21.1. Manual shutoff valves.** An approved manual shutoff valve shall be installed upstream of all control devices on the main burner of a gas-fired boiler. The takeoff point for the gas supply to the pilot shall be valved separately and be upstream of the gas shutoff valve for the main burner. A union or other approved means of disconnect shall be provided immediately downstream from these shutoff valves.

**4.21.2. Gas pressure regulators.** An approved gas-pressure regulator shall be installed on gas-fired boilers if the gas supply pressure is higher than that at which the main burner is designed to operate. A separate approved gas-pressure regulator shall be installed to regulate the gas pressure to any pilot.

**Exceptions:** A separate regulator is not required if the pilot:

1. Is part of a manufacturer-assembled boiler-burner unit approved by the code official;
2. Serves a gas-fired boiler in Group R Occupancies of less than six units; or
3. Serves a gas-fired boiler in Group U Occupancies.

**4.21.3 Code compliant.** Fuel piping installation shall comply with the provisions of the current edition of the Seattle Fuel Gas Code.

**4.22 Steam and hydronic piping.** Steam and hydronic piping systems that are part of a boiler or heating system shall comply with the requirements of the Seattle Mechanical Code, Chapter 12, Hydronic Piping, and the requirements of this code. When piping falls outside the scope of the applicable sections of the above codes, a standard approved by the code official may be used.

### **4.22.1 Materials and construction.**

A. Quality. All piping, tubing, valves, joints, fittings, devices, and materials shall be free of defects and shall comply with nationally recognized standards of construction listed in Section 3 of this code or as approved by the code official.

B. Prohibited. Galvanized piping and fittings are prohibited.

**4.23 Elevator machine rooms/spaces and hoistways.** No pipes conveying gases, vapors, or liquids that are not specifically used in the operation of the elevator shall be installed in any elevator hoistway, machine room, or machinery space.

**4.24 Alarms.** Alarms such as CO detectors, smoke detectors, CO<sub>2</sub> detectors, or other alarms required by this code or other codes are subject to inspection by the code official. Alarms shall be properly maintained and upon request by the code official shall be demonstrated to be in good working order.

**4.25 Boilers certified as automatic.** The Seattle Steam Engineer and Boiler Operator License Law, Seattle Municipal Code Chapter 6.420, provides for reduced attendance requirements for boilers that are certified as automatic. Boilers certified as automatic are required to have the following:

1. Control and limit devices as set forth in Table 4.25 or as certified by the manufacturer if approved by the code official to be equivalent.
2. Feed water systems not requiring manual operation.
3. Stack temperature gauges.
4. Oil temperature and oil suction pressure gauges and/or high and low gas pressure gauges, as applicable.
5. The original equipment manufacturer's operating and installation manual, together with electrical schematics or diagrams.
6. Boilers 12.5 MM BTU/H and greater. All boilers certified as automatic of 12,500,000 Btu/h input and greater shall also comply with the installation requirements of the current edition of NFPA 85, Boiler and Combustion Systems Hazards Code.
7. Solid fuel boilers. The code official may approve solid-fuel-fired boilers that meet the safety requirements for automatic gas- or oil-fired boilers.

**Table 4.25-A (Part 1 of 2)**

Boiler Group	Fuel	Fuel Input <sup>1</sup> Range in BTU/hr. (inclusive)	Type of Pilot <sup>2</sup>	Safety Control Timing (in seconds unless otherwise indicated)				Assured Fuel Supply Control <sup>4</sup>	Assured Fuel Supply Control <sup>5</sup>
				Trial for Pilot	Trial for Main Burner Flame		Main Burner Flame Failure <sup>3</sup>		
					Direct Electric Ignition	Flame Pilot			
A	Gas	0 – 400,000	Any type	90	Not required	90	90	Not required	Required
B	Gas	400,001 – 2,500,000	Any type	15	15	15	2 – 4	Not required	Required
C	Gas	2,500,001 – 12,500,000	Interrupted or intermittent	15	15	15	2 – 4	Required	Required
D	Gas	Over 12,500,000	Interrupted	15	15	15	2 – 4	Required	Required
E	Oil	0 – 400,000	Any type	Not required	90	90	90	Not required	Required
F	Oil	400,001 – 3,000,000	Interrupted	Not required	30	30	2 – 4	Required	Required
G	Oil	3,000,001 – 12,500,000	Interrupted	Not required	15	15	2 – 4	Required	Required
H	Oil	Over 12,500,000	Interrupted	15	15	60	2 – 4	Required	Required
K	Electric	All	Not required	Not required	Not required	Not required	Not required	Not required	Not required

**Table 4.25-A (Part 2 of 2)**

Boiler Group	Fuel	Fuel Input Range in BTU/hr. (inclusive) <sup>1</sup>	Low Fire Start Up Control <sup>6</sup>	Pre-purging Control <sup>7</sup>	Hot Water Temperature and Low Water Limit Controls <sup>8</sup>	Steam Pressure and Low Water Limit Controls <sup>9</sup>	Approved Fuel Shutoff <sup>10</sup>	Control and Limit Device System Design <sup>11</sup>
A	Gas	0 – 400,000	Not Required	Not Required	Required	Required	Not Required	Required
B	Gas	400,001 – 2,500,000	Not Required	Not Required	Required	Required	Not Required	Required
C	Gas	2,500,001 – 12,500,000	Required	Required	Required	Required	Required	Required
D	Gas	Over 12,500,000	Required	Required	Required	Required	Required	Required
E	Oil	0 – 400,000	Not Required	Not Required	Required	Required	Not Required	Required
F	Oil	400,001 – 3,000,000	Not Required	Not Required	Required	Required	Not Required	Required
G	Oil	3,000,001 – 12,500,000	Required	Required	Required	Required	Required	Required
H	Oil	Over 12,500,000	Required	Required	Required	Required	Required	Required
K	Electric	All	Not Required	Not Required	Required	Required	Not Required	Required

**Footnotes for Table 4.25, Parts 1 and 2.**

1. Fuel input shall be determined by one of the following:

- (a) The maximum burner input as shown on the burner nameplate or as otherwise identified by the manufacturer.
- (b) The nominal boiler rating, as determined by the code official, plus 25 percent.
- (c) A permanently affixed meter to indicate fuel consumption, timed to determine the rate of fuel input.

2. Automatic boilers shall have one flame failure device on each burner which shall prove the presence of a suitable ignition source at the point where it will reliably ignite the main burner, except that boiler groups A, B, E, F, and G which are equipped with direct electric ignition shall monitor the main burner, and all boiler groups using interrupted pilots shall monitor only the main burner after the prescribed limited trial and ignition periods. Continuous pilots used in boiler groups A and B shall accomplish 100 percent shutoff upon pilot flame failure. Intermittent pilots may be used in group C for atmospheric burners only, provided the input per combustion chamber does not exceed 5,000,000 Btu/h and modulating or high-low firing is not employed.

3. Continuous pilots provided on manufacturer assembled boiler-burner units must be tested by an approved agency complying with nationally recognized standards and approved by the code official.

4. Boiler groups C and D shall have controls interlocked to accomplish a non-recycling fuel shutoff upon detecting high or low gas pressure. Boiler groups F, G, and H using steam or air for fuel atomization shall have controls interlocked to accomplish a non-recycling fuel shutoff upon detecting low atomizing steam or air pressure. Boiler groups F, G, and H equipped with a preheated oil system shall have controls interlocked to provide fuel shutoff upon detecting low oil temperature.
5. Automatic boilers shall have controls interlocked to shut off the fuel supply in the event of draft failure if forced or induced draft fans are used or, in the event of low combustion air flow, if a gas power burner is used. In boiler groups C, D, G, and H failure to prove the air flow required shall result in a safety shutdown. Where a single motor directly driving both the fan and the oil pump is used, a separate control is not required.
6. Boiler groups C, D, G, and H, when firing in excess of 400,000 Btu per combustion chamber, shall be provided with low fire start of its main burner system to permit smooth light-off. This will normally be a rate of approximately one-third of its maximum firing rate.
7. Boiler groups B, C, D, G, and H shall not permit pilot or main burner trial for ignition operation before a purging operation of sufficient duration to allow a minimum of four complete air changes through the furnace, including combustion chamber and the boiler passes. Where this is not readily determinable, five complete air changes of the furnace, including combustion chamber up to the first pass, are considered equivalent. An atmospheric gas burner with no mechanical means of creating air movement or an oil burner which obtains two-thirds or more of the air required for combustion without mechanical means of creating air movement shall not require purge by means of four air changes so long as its secondary air openings are not provided with means of closing. If such burners have means of closing secondary air openings, a time delay shall be provided which puts these closures in a normally open position for four minutes before attempting ignition. An installation with a trapped combustion chamber shall always be provided with a mechanical means of creating air movement for purging. Purge air flow in boiler groups C, D, G, and H shall be proved. Proof of purge air flow may be accomplished by providing:
  - (1) Air pressure and "open damper" interlocks for all dampers in the flow path, or
  - (2) Air flow interlock.
8. Shall comply with Section 4.18 of this code.
9. Shall comply with Section 4.18 of this code.
10. Automatic boilers firing gas or using gas pilots shall be equipped with an approved safety shutoff valve(s) in the main gas burner supply line or pilot gas burner supply line. The safety shutoff valve(s) shall be interlocked to the required programming control devices. Boilers in group C having an input per combustion chamber which does not exceed 5,000,000 Btu/h shall have two safety shutoff valves in series or one safety shutoff valve of the type incorporating a valve seal over travel interlock. Boilers in group C having an input per combustion chamber exceeding 5,000,000 Btu/h and boilers in group D shall have two safety shutoff valves in series and the downstream valve shall be of the type incorporating a valve seal over travel interlock. Boilers in groups C and D using gas in excess of one-half pound per square inch ( $\frac{1}{2}$  lb/in<sup>2</sup>) pressure shall be provided with a permanent and ready means for making periodic tightness checks of the main fuel safety shutoff valves. Boilers in group D shall have a normally open electrically operated valve in a vent line between the two safety shutoff valves. This vent shall be sized in accordance with an approved vent sizing table but shall not be less than three-quarters ( $\frac{3}{4}$ ) inch pipe size. On oil burners where the safety shutoff valve will be subjected to pressures in excess of 10 psi, a second safety shutoff valve shall be provided in series with the first. In boiler group H where a second safety shutoff valve is required, the upstream valve shall be of the 3-way bypass or recirculating type.
11. Control and limit device systems shall be grounded with operating voltage not to exceed 150 volts, except that upon approval by the code official, existing control equipment to be reused in an altered boiler control system may use 220-volt single phase with one side grounded, provided such voltage is used for all controls. Control and limit devices shall interrupt the ungrounded side of the circuit. A readily accessible means of manually disconnecting the control circuit shall be provided with controls arranged so that when they are de-energized the burner shall be inoperative.

**4.26 Boilers certified as monitored.** Boilers certified as monitored shall comply with the reduced attendance requirements allowed by the Seattle Steam Engineer and Boiler Operator License Law, Seattle Municipal Code Chapter 6.420. The boiler owner or lessee is responsible for compliance with this Section 4.26.

**4.26.1 Definitions related to monitored boiler systems.** For the purposes of this section, certain terms, phrases, words, and their derivatives shall be defined as follows:

**CENTRAL STATION AGENCY** means a 'Class A' Central Station Agency as defined and approved by the Seattle Fire Department.

**MONITORING SYSTEM** means a protective alarm signaling system used for surveillance of controls and limit devices required on certain automatic boilers.

**ON-SITE MONITORED SYSTEM** means a monitoring system with constant supervision by competent and experienced personnel in a central supervising station located on the site where the boiler is installed. The system includes equipment and facilities required to allow the boiler and monitoring system operators to test and operate the system and, upon receipt of a signal, to take responsive action.

**SIGNALING SYSTEMS** means electrically operated circuits, instruments, and devices, together with the necessary electrical energy designed to transmit alarms and trouble signals to the monitoring system operators to effectively monitor boilers.

**4.26.2 Approval of monitoring systems.**

A. Status. Monitored boiler status is available only to boilers certified by the code official as automatic boilers.

B. Acceptance tests. Upon completion of system installation, a satisfactory test of the entire installation shall be made in the presence of the City inspector. It shall be the responsibility of the applicant to demonstrate the operation and reliability of the monitoring system during the test of the equipment. The City inspector may require additional tests if deemed necessary for the operation and proper maintenance of the monitoring system and the boiler plant served by such system.

C. Inspection. An inspection by a City inspector may be conducted annually for certification renewal.

D. Listing required. All monitoring system devices shall be listed and labeled by a nationally recognized testing agency.

**4.26.3 Signals, personnel, and reporting.**

A. Required signals. The following signals are required:

1. Low water level;
2. Flame failure; and
3. Steam pressure at the upper limit setting on steam boilers or water temperature at the upper limit setting on hot water boilers. Upon sensing any of the above conditions, signal shall be sent to the monitoring system. The monitoring system shall send a signal if existing limit controls and flame failure devices have caused the boiler to shut down.

B. Monitoring system personnel. The monitoring station shall have sufficient personnel on duty to assure immediate attention to all signals received.

C. Report availability. Reports of all signals received by the monitoring station shall be made available when requested by the code official and as required in this Section 4.26.3.

D. Disposition of signals. Upon receipt of a signal pertaining solely to matters of equipment maintenance of the signaling systems, the monitoring station operating company shall:

1. Notify the property owner when the function of signaling system is interrupted and is not corrected within 12 hours.
2. Notify the on-site designated point of contact as soon as possible.
3. Notify the code official upon receipt of a signal not caused by routine inspection and maintenance.

E. Procedures to be available. Procedures for responding to signals shall be readily available to the on-site designated point of contact and shall include procedures for notifying the boiler supervisor and the code official.

F. Maintenance and repair of monitoring equipment.

1. The monitoring station operating company shall have a person available within two-hours' travel who is competent to inspect, maintain, and repair the monitoring equipment.
2. Maintenance. All monitoring station systems shall be under the supervision of qualified persons. These persons shall cause proper tests and inspection to be made at prescribed intervals and shall have general charge of all alterations and additions to the monitoring system under their supervision or a satisfactory agreement on the maintenance, operation and efficiency of the system shall be provided.

## Section 5 – In-service inspections for existing installations

**5.1 Duty to inspect.** The code official shall inspect or have inspected all boilers and pressure vessels and listed potable water heaters. After satisfactory completion of inspections and upon receipt of fees as set forth in the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees, the code official shall issue a Certificate of Inspection. Inspectors conducting in-service inspections must have current commissions issued by the National Board of Boiler and Pressure Vessel Inspectors. Inspectors can be either City inspectors or insurance company inspectors.

**5.2 In-service inspection.** In-service inspections are conducted in accordance with the current edition of the National Board Inspection Code (NBIC), Part 2. If differences occur between provisions of this code and referenced codes or standards, the provisions of this code apply. The code official shall keep a complete record of the type, dimensions, maximum allowable working pressure, age, condition, location, and date of the last recorded internal and external inspections of all boilers and pressure vessels regulated by this code.

**Exemptions from in-service inspection.** The following boilers, pressure vessels, and other equipment shall not be required to comply with in-service inspection requirements:

1. Portable. Portable unfired pressure vessels subject to regular inspection by the State of Washington (chapter 70.79 RCW).

2. LPG containers. Containers for liquefied petroleum gases regulated by the Seattle Fire Code.
3. Specific unfired pressure vessels. Unfired pressure vessels located in Group B, F, H, M, R, S, and U occupancies having a volume of 5 cubic feet or less and operated at pressures not exceeding 250 psi.
4. Small unfired pressure vessels. Regardless of occupancy, unfired pressure vessels that are:
  - a. less than 1 ½ cubic feet in volume, (approx. 11.25 gallons).
  - b. 6 inches in internal diameter with no limit as to length or pressure.
5. Pressure relief protected. Unfired pressure vessels of any size that are protected by approved pressure relief devices set to operate at a pressure not exceeding 15 psi or otherwise open to ambient atmospheric pressure.
6. DOT inspected. Any boiler or pressure vessel subject to regular inspection by federal inspectors or licensed by federal authorities, such as D.O.T.
7. Certain electric boilers. Electric boilers that meet all of the following criteria:
  - a. Having a vessel volume not exceeding 1 ½ cubic feet; and
  - b. Having a maximum allowable working pressure of one hundred (100) psi; and
  - c. If constructed after June 10, 1994, the boiler was constructed to American Society of Mechanical Engineers Boiler and Pressure Vessel Code standards, or listed or otherwise certified by a nationally recognized testing agency or recognized foreign testing laboratory.
8. Storage tanks. Water storage tanks with no air cushion and no energy or heat source.
9. State Owned. Boilers and pressure vessels under the direct ownership and operation of the State of Washington, and that are inspected in accordance with Washington State Boiler and Pressure Vessel rules (chapter 70.79 RCW) and in possession of a current Washington State Certificate to Operate.
10. Group R and U occupancies. Steam heating boilers, low-pressure hot water heating boilers, hot-water-supply boilers, and pressure vessels in Group R occupancies of less than six units and in Group U occupancies.

**5.3 In-service inspection frequency.** Inspection frequency shall, at a minimum, be as required by this Section 5.3. At the discretion of the inspector and as warranted by equipment conditions, the internal, external, or ultrasonic (UT) inspection frequency may be increased until the inspector is satisfied that conditions are corrected and that the minimum prescribed frequencies of inspection may resume.

#### **5.3.1 External inspections.**

- A. Boiler inspections. Boilers are inspected externally annually. All required boiler controls and safety devices are tested during the external inspection to determine that they are operating properly.
- B. Unfired pressure vessel inspections. Unfired pressure vessels are inspected externally biennially.
- C. Potable water heaters and pool heaters. In Group A, E, and I occupancies, potable water heaters, combination water heaters (fired, electric, thermal, solar, and indirect), and pool heaters shall be inspected externally biennially for safe condition. The safety inspection consists of lifting

the safety relief try-lever to verify free flow of the safety relief valve and of a visual inspection of the exterior of the vessel for leakage or physical damage.

**5.3.2 Internal Inspections.** Boilers are subject to internal inspection as follows:

A. Annual inspections. High pressure boilers are inspected internally annually.

B. Biennial inspections.

1. Low pressure steam boilers shall be inspected internally at least once every two years.
2. Unfired pressure vessels, when subject to corrosion and where construction allows, are inspected internally at least once every two years. Subject to the discretion of the inspector, an ultrasonic examination of the external side of the pressure vessel may substitute for an internal inspection.

C. Quadrennial inspections. Low pressure hot water heating boilers not using corrosion inhibitors are inspected internally at least once every four years.

D. Discretionary inspections. Low pressure hot water heating boilers using corrosion inhibitors, glycol, or oil are inspected internally at a frequency determined by the inspector. The inspector shall consider factors including, but not limited to, history of the installation, adequacy of corrosion inhibitors, and tightness of the system.

## **5.4 Preparation for Inspection.**

**5.4.1 Boiler preparation.** The owner or user shall prepare a boiler for internal inspection as necessary to allow for a meaningful inspection.

A. Preparation shall include the following unless directed otherwise by the boiler inspector:

1. Water shall be drained and the boiler thoroughly cleaned.
2. Manhole and handhole plates and wash-out plugs and water column connections shall be removed.
3. Furnace and combustion chambers shall be thoroughly cooled and cleaned.
4. All grates of internally fired boilers shall be removed.
5. Brickwork or refractory shall be removed, if needed, to determine the condition of the boiler headers, furnace, supports or other parts.
6. Leakage of steam or hot water into the boiler shall be prevented while it is open for inspection.
7. Low water cutout shall be disassembled as necessary to allow for inspection.
8. Compliance with any lock-out or tag-out and confined space entry procedures shall be followed if required by the owner, operator, OSHA, WDOSH rules, and other regulations applying to the safety of personnel.

B. Unprepared. If a boiler or unfired pressure vessel has not been properly prepared for an internal inspection, the inspector may decline to make the inspection or test. The Certificate of Inspection will be withheld until the owner or user complies with the inspector's requirements. At the discretion of the inspector, an additional inspection fee may be charged per the Fee Subtitle, Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees.

**5.5 Inspection results – Corrections required.** The inspector shall notify the owner or authorized representative of defects and deficiencies. It is the responsibility of the owner to

promptly and properly make the corrections required by the inspector. If such corrections are not made, or if the operation of the boiler or pressure vessel is deemed unsafe by the inspector, the Certificate of Inspection for the boiler or pressure vessel may be withheld until the corrections are made.

**5.6 Inspection by authorized insurance companies.** Inspection of boilers and pressure vessels may be made by employees of an authorized insurance company. Such inspection shall be conducted in accordance with the requirements of this code by persons holding an active commission from the National Board of Boiler and Pressure Vessel Inspectors.

**5.6.1. Inspector list.** Authorized insurance companies must annually notify the code official, in writing, of those inspectors that will be conducting inspections within The City of Seattle. Notification shall include the National Board Commission number and expiration date of the inspectors' current National Board Commission. Notification in writing may be on company letterhead or by email. Authorization is subject to the approval of the code official.

**5.6.2. Reports.** Authorized insurance inspectors shall make their reports to the code official on forms or as prescribed by the Department.

**5.6.3. Suspension of coverage.** Authorized insurance inspectors shall immediately notify the code official of any suspension of insurance coverage.

**5.6.4. New or discontinued coverage.** Authorized insurance companies providing insurance coverage of equipment subject to inspection by the code official shall notify the code official within 30 days of any new insurance in effect or any discontinuance of insurance coverage of that equipment.

**5.7 Certificate of inspection.** It is unlawful to operate any boiler or pressure vessel without first obtaining a valid Certificate of Inspection from the code official. Certificates of Inspection shall be displayed in a conspicuous place adjacent to the boiler or vessel and a copy placed in the service manual. The Certificate of Inspection shall not be issued until the equipment passes inspection and is approved by the code official. A grace period of no longer than 60 days past the expiration date of a Certificate of Inspection may be granted.

**5.8 Removal from service due to dangerous conditions.** If the operation of a boiler or pressure vessel is deemed by the code official to constitute an imminent hazard, the pressure on such boiler or pressure vessel shall be relieved and the boiler or pressure vessel shall be secured at the owner's expense. The unsafe boiler or pressure vessel shall not be operated without approval of the code official, who may issue an emergency order pursuant to Section 1.6.7.

## **5.9 Operation of boilers and pressure vessels.**

**5.9.1. Operation.** Boilers and pressure vessels shall be operated and maintained by an appropriately licensed boiler operator as required by the Seattle Steam Engineer and Boiler Operator License Law, Seattle Municipal Code Chapter 6.420.

**5.9.2. Maintenance.** Boilers and pressure vessels shall be operated and maintained in a safe condition as required by the code official and in accordance with this code and nationally recognized standards. All safety devices, controls, and appurtenances shall be maintained and cared for throughout the life of the boiler or pressure vessel. When the devices are deemed to be non-functioning, they shall be immediately replaced or repaired, and the vessel made whole and safe to operate.

**5.10 Accidents are required to be reported.** In case of an explosion or other event rendering a boiler or pressure vessel unsafe to return to operation, notice shall be given immediately to the code official. No boiler or unfired pressure vessel nor any parts shall be removed or disturbed before an inspection is made by a city inspector, except as necessary to prevent injury. The code official shall conduct an investigation to determine the cause of the accident and to recommend actions to prevent future occurrences.

## **Section 6 – Repairs and alterations**

### **6.1 Repairs and alterations of boilers and pressure vessels.**

**6.1.1. Pre-approval.** Repairs and alterations to in-service boilers and pressure vessels must be approved by the code official prior to proceeding with the repair or alteration and require a permit.

**Exception:** Routine Repairs, as defined by the National Board Inspection Code Part 3, Repairs and Alterations, do not require a permit.

**6.1.2. Code compliance.** Repairs or alterations to pressure-retaining portions of the boiler or pressure vessel shall comply with the current edition of this code and the National Board Inspection Code (NBIC) Part 3, Repairs and Alterations. If there are conflicts between the two codes, this code applies.

**6.1.3. Notification.** The in-service inspector shall be notified of the nature of the repair or alteration and kept apprised of the progress of the work.

**6.1.4. Approval.** The Repair Inspector shall conduct the final inspection and accept the repair or alteration as satisfactory before the boiler or pressure vessel is returned to service. Routine Repairs do not require a final inspection.

**6.1.5. Documentation.** Upon completion of the required documentation, the Repair Organization shall submit a copy to the code official.

## Section 7 – Retroactive requirements

**7.1 Retroactive requirements.** The following requirements apply to all boilers and pressure vessels whether new or existing:

- A. Every power hot water boiler, other than manually fired, shall be equipped with at least two temperature controls wired in series.
- B. Every steam heating boiler, other than manually fired, shall be equipped with at least two pressure controls and a low-water cutoff.
- C. Each temperature or pressure control shall have an independent sensing element.
- D. Every mechanically fired boiler that requires manual ignition of the burner shall have a manual reset device to prevent automatic recycling of the ignition in the event of any shut down.

# Steam Engineer and Boiler Operator License Law

## (Chapter 6.420 SMC)

### 6.420.010 Scope, purpose, and authority

The regulation and licensing of steam engineers and boiler operators and the operation of boilers and steam engines are governed by this Chapter 6.420.

The purpose of this Chapter 6.420 is to provide standards for safe operation of boilers and steam engines.

The Director of the Seattle Department of Construction and Inspections is authorized to implement and enforce all the provisions of this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 124919, § 24, 2015 [department head name change and style cleanup]; Ord. 122115, § 2, 2006.)

### 6.420.020 Unlawful activities

A. It is unlawful to have charge of, or operate, or permit anyone to have charge of, or operate, any boiler or steam engine without a license issued under this Chapter 6.420.

B. It is unlawful to hire or contract with a person who does not have a license issued under this Chapter 6.420 to have charge of, or operate, any boiler or steam engine.

C. It is unlawful for any person to knowingly:

1. Prevent or attempt to prevent any person licensed under this Chapter 6.420 from performing any act required to be performed by this Chapter 6.420; or

2. Require or attempt to require any person licensed under this Chapter 6.420 to perform any act prohibited by this Chapter 6.420.

D. It is unlawful to fail to abide by a stop work order issued by the Director.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### 6.420.030 Definitions

Words and phrases used in this Chapter 6.420 have the following meanings:

“Boiler” means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum by the direct application of heat. The term “boiler” also includes fired units for heating or vaporizing liquids other than water where these systems are complete within themselves.

“Boiler plant” means one or more boilers and connecting piping and vessels within the same premises.

“Boiler supervisor” means a steam engineer Grade I, II, or III who has passed additional examinations as required by the Director pursuant to the provisions of this Chapter 6.420.

“BHP” means brake horsepower.

“Certified automatic boiler” means a boiler equipped with certain controls and limit devices as required by the Seattle Boiler Code, and for which the Director has finalized an Automatic Certification Application Permit.

“Certified monitored boiler” is a certified automatic boiler that meets the requirements of the Seattle Boiler Code and for which the Director has finalized a Monitored Certification Application Permit.

“City Boiler Inspector” means a City of Seattle Boiler/Pressure Systems Inspector employed by the Department.

“Department” means the Seattle Department of Construction and Inspections.

“Director” means the Director of the Seattle Department of Construction and Inspections and authorized representatives.

“Hoist and portable boiler” means a boiler used to provide steam for the operation of various types of equipment such as floating cranes, piledrivers, and other similar types of equipment used in the construction industry.

“Hot-water supply boiler” is a boiler having a volume exceeding 120 gallons, or a heat input exceeding 200,000 BTU per hour, or a water temperature exceeding 210 degrees Fahrenheit but not exceeding a temperature of 250 degrees Fahrenheit, and a pressure not exceeding 160 psi, that provides hot water to be used externally to itself.

“kBtuh” means thousand BTU per hour.

“Low-pressure hot-water heating boiler” is a boiler from which hot water is circulated for heating purposes at pressures not exceeding 160 psi and temperatures not exceeding 250 degrees Fahrenheit, that provides hot water to be used externally to itself.

“Low-pressure steam-heating boiler” is a boiler furnishing steam at pressures not exceeding 15 psi.

“Nonregenerative system” is a system in which the heat rejected by an engine is lost to the atmosphere.

“Out of service.” A boiler is “out of service” if it is manually shut down for inspection, maintenance, or repair, except for limited repairs and adjustments as set forth in Section 6.420.120.

“Potable water heater” (fired, electric, solar, and indirect) is a closed vessel in which water is heated by the combustion of fuels, electricity, or any other source, and withdrawn for use external to the system. Potable water heaters do not exceed any of the following criteria or capacities: a nominal water-containing capacity of 120 gallons, a heat input of 200,000 BTU per hour, an operating temperature of 210 degrees Fahrenheit, and a pressure of 160 psi.

“Power hot-water boiler” (high-temperature water boiler) is a boiler used for heating water or liquid to a pressure exceeding 160 psi or to a temperature exceeding 250 degrees Fahrenheit.

“Power steam boiler” is a boiler in which steam or other vapor is generated at pressures exceeding 15 psi. For purposes of this Chapter 6.420, the term shall not include a small power boiler.

“psi” means pounds per square inch.

“Regenerative system” is a system in which the heat rejected by an engine is used in a boiler.

“Seattle Boiler Code” is the Seattle Boiler and Pressure Vessel Code, as listed in Section 22.101.010.

“Small power boiler” is a power steam boiler with pressures not exceeding 150 psi and not exceeding 800,000 BTU per hour heat input.

“Steam engine” means all prime movers using vapors from a boiler for motive power, steam-driven compressors, and steam pumps except steam pumps and similar auxiliaries used only as appurtenances for the operation of a boiler.

(Ord. 126359, § 1, 2021; Ord. 126278, § 9, 2021 [cross-reference update]; Ord. 124919, § 25, 2015 [department/department head name change and style cleanup]; Ord. 122115, § 2, 2006.)

## **6.420.040 Applications and examinations**

A. Persons desiring a license, or change of limitation as described in Section 6.420.070, shall make written application to the Director on forms provided by the Director. Applications shall be accompanied by an affidavit attesting to the applicant’s training and experience, and other supporting credentials as may be necessary to determine the applicant’s fitness. Proof of experience is not required for Grade V or Small Power Boiler Operator licenses.

B. Applicants for an operator’s license shall pass an examination administered by the Director. The examination fee in Section 22.900E.050 shall be paid in advance and shall be assessed each time the examination is administered.

C. Examinations shall be practical in their character and shall relate to those matters that will fairly test the minimum capacity, skill, experience, and competence of each person examined to safely operate and properly care for boilers and steam engines, within the scope of the license sought.

D. An applicant who successfully completes the examination and shows to the satisfaction of the Director that they meet the minimum qualifications for one of the grades of license specified in Table A of Section 6.420.070, shall be issued the appropriate license upon payment of the license fee in Section 22.900E.050.

E. The Director shall refuse to certify the applicant for a steam engineer’s or boiler operator’s license if the result of the examination is such that the Director determines the applicant does not have sufficient knowledge of, and experience in, the care or operation of boilers or steam engines, or if the applicant is found to be unfit to operate boilers or steam engines safely.

F. It is sufficient cause to refuse a steam engineer’s or boiler operator’s license, or any renewal thereof, if the applicant, through neglect or incompetence while in charge of a boiler or steam engine, has caused serious damage to property or has endangered the lives of others. (Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

## **6.420.050 Exemptions from license requirements**

A steam engineer’s or boiler operator’s license is not required of any person in charge of, or operating, the following:

- A. Any boiler or steam engine subject to federal regulations;
- B. Any boiler not subject to reinspection by the Seattle Boiler Code;
- C. Low-pressure hot water, low-pressure steam and hot-water supply boiler plants having inputs of less than 2,500,000 BTU per hour;

D. Any boiler having an input of less than 100,000 BTU per hour and a maximum pressure of 100 pounds per square inch or less;

E. Potable water heaters;

F. Ancillary equipment that may be connected to the operation of a boiler or boiler system such as, but not limited to, pumps, filters, pre-heaters, heat exchangers, and related pressure vessels;

G. Non-regenerative gas turbines; or

H. Boiler equipment being installed by and under the control of the boiler manufacturer or the manufacturer's representative, a boiler installation contractor, or a boiler or burner installer making the installation under the manufacturer's written instructions and recommendations.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.060 Periodic refresher training required**

All persons licensed according to this Chapter 6.420 shall attend an approved refresher course every five years. A document indicating proof of completion of the approved refresher course shall be provided to the Director.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.070 Grades of licenses and limitations**

A. The grades of steam engineer and boiler operator licenses are as follows:

Grade I Boiler Supervisor

Grade II Boiler Supervisor

Grade III Boiler Supervisor

Grade I Steam Engineer

Grade II Steam Engineer

Grade III Steam Engineer

Grade IV Boiler Operator

Small Power Boiler Operator

Grade V Boiler Operator

B. License Limitations. The Director may impose limitations on licenses restricting the licensee to the operation and maintenance of particular equipment at a stated location, or to the operation and maintenance of a certain class of boilers or steam engines, or to specified permitted services in connection with the operation and maintenance of boilers and steam engines. Limitations shall be based upon the applicant's qualifications and shall be reasonably related to the protection of the public in the safe operation and maintenance of boilers and steam engines. Limitations may include, but are not limited to, the following:

1. Operation of boilers only.
2. Operation of electric boilers only.
3. Operation of hot water boilers only.
4. Work at one address only.

C. Applicants for a license shall possess the minimum qualifications for each grade of license as specified in Table A for 6.420.070.

<b>Table A for 6.420.070—Qualifications for Steam Engineer and Boiler Operator Licenses</b>	
<b>Grade of License Applied For</b>	<b>Minimum Qualifications</b>
<b>Grade I Boiler Supervisor</b>	At least one year of experience as a Grade I Steam Engineer or Grade II Boiler Supervisor pursuant to the provisions of this Chapter 6.420.
<b>Grade II Boiler Supervisor</b>	At least one year of experience as a Grade II Steam Engineer or Grade III Boiler Supervisor pursuant to the provisions of this Chapter 6.420.
<b>Grade III Boiler Supervisor</b>	At least one year of experience as a Grade III Steam Engineer pursuant to the provisions of this Chapter 6.420.
<b>Grade I Steam Engineer</b>	1. At least five years of employment in a position directly responsible for the operation of boilers, or 2. Educational substitution for experience as allowed by Section 6.420.080.A, plus three years of experience. Licenses shall be limited to boilers only unless the applicant proves at least one year of experience in the operation of steam engines.
<b>Grade II Steam Engineer</b>	1. At least four years of employment in a position directly responsible for the operation of boilers, or 2. Educational substitution for experience as allowed by Section 6.420.080.A, plus two years of experience. Licenses shall be limited to boilers only unless the applicant proves at least one year of experience in the operation of steam engines.
<b>Grade III Steam Engineer</b>	1. At least three years of employment in a position directly responsible for the operation of boilers, or 2. Educational substitution for experience as allowed by Section 6.420.080.A, plus one year of experience. Licenses shall be limited to boilers only unless the applicant proves at least one year of experience in the operation of steam engines.
<b>Grade IV Boiler Operator</b>	1. At least one year of employment in a position directly responsible for the operation of boilers, or 2. Allowable educational substitution for experience as allowed by Section 6.420.080.A or 6.420.080.B. Licenses shall be limited to boilers only unless the applicant proves at least one year of experience in the operation of steam engines.
<b>Small Power Boiler Operator</b>	No previous experience required.
<b>Grade V Boiler Operator</b>	No previous experience required.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.080 Allowable educational substitution for experience**

The educational qualifications described in this Section 6.420.080 may substitute for the work experience required by Section 6.420.070, when approved by the Director.

A. Graduation from a recognized school of technology with a curriculum approved by the Steam Licensing Advisory Board.

B. Completion of a training course in the fundamentals of boiler operation approved by the Director may be substituted for one year of boiler operating experience. The course shall include at least 40 hours of classroom work and either:

1. Eighty hours of on-site training relating to the care and operation of boilers under the direct supervision of a steam engineer with a license of Grade I, II, or III; or
2. Forty hours of lab work at a facility approved by the Director.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.090 Special license**

A. Those who have been employed at least two years as licensed steam engineers or boiler operators operating a boiler plant may apply for a special license if the capacity of the plant is enlarged or changed beyond the limits of their license. The special license shall permit the licensee to operate only such plant. The Director shall make an investigation of the changed boiler plant conditions together with such examination of the applicant as may be necessary to determine whether the applicant is qualified under this Chapter 6.420 to operate the enlarged or changed boiler plant. When the investigation and examination reveal that the applicant is qualified to operate the plant in its changed condition, the Director shall approve the application and issue a special license.

B. Special licenses may be renewed only once. At the expiration of the renewed license, licensees shall upgrade their licenses in accordance with the requirements of Section 6.420.070. If upgrades are not applied for, the licenses shall revert to the grade held prior to the issuance of the special license.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.095 Reciprocity**

The Director may establish procedures for recognizing steam engineer and boiler operator licenses issued by other jurisdictions whose licensing programs satisfy the purposes of this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.100 Observation and inspection of boilers**

A. The minimum requirements for operation and inspection of each type and capacity of equipment are as set forth in this Section 6.420.100 and Tables A and B for 6.420.100.

B. Constant attendance. When constant attendance is required by this Chapter 6.420, the engineer or boiler operator in charge of a boiler, boiler plant, or steam engine shall not leave the boiler room or engine room when the boiler or steam engine is being operated without first either stopping the steam engine and shutting off all sources of heat in the boiler, or being relieved by a person duly licensed under this Chapter 6.420.

**Exception:** The steam engineer or boiler operator may take an occasional break without stopping the engine, shutting down the boiler or being relieved. In no case may any break last more than 20 minutes.

C. Checked by boiler supervisor. When this chapter requires a boiler to be checked by a boiler supervisor, the boiler supervisor shall inspect all controls and safety devices pursuant to the requirements of subsection 6.420.120.D, as a minimum.

D. Checked by licensed operator. When this Chapter 6.420 requires a boiler to be checked by a licensed operator, a person holding a license issued under this Chapter 6.420 shall perform a physical examination of the boiler or engine to ensure proper operation and maintenance pursuant to the requirements of Sections 6.420.110 and 6.420.150, as a minimum.

E. Twice daily check. When this Chapter 6.420 requires twice daily checks, the inspections that are required to be recorded in the boiler logbook by Section 6.420.110 shall be performed at least two times each day. The first check of the day shall be made not less than eight hours after the last recorded check of the previous day; the second check of the day shall be made at least six hours after the first recorded check of the day. Additional checks may be made to ensure safe operation of a boiler. Twice daily checks may not be performed by a Boiler Supervisor unless the Boiler Supervisor is a full time employee of the boiler owner.

F. Check once every two hours. When this Chapter 6.420 requires a check every two hours, a physical examination of the boiler or engine to ensure proper operation and maintenance pursuant to the requirements of Sections 6.420.110 and 6.420.150, as a minimum, shall be made at least once every two hours.

G. For purposes of Tables A and B for 6.420.100, the input ratings of boilers shall be computed as follows:

1. For gas, propane, and similar burners, the rating shall be equal to the burner input as rated and labeled by the burner manufacturer. Where actual fuel flow during burner operation at the maximum firing rate can be reliably measured, the burner input may be computed by such method.

2. For oil burners, the rating shall be equal to the gallons-per-hour rating of the fuel nozzle or nozzles.

3. For electric boilers, the rating shall be equal to the electrical input in KW as rated and labeled by the boiler manufacturer.

4. In the case of multiple fuel burners, the rating shall be the greater of all computed inputs.

5. For boilers in battery (connected to a common header), the rating shall be the cumulative input, as measured in subsections 6.420.100.G.1 through 6.420.100.G.4. For boilers in battery wired so that only a single boiler can operate at a given time, the license requirement shall be determined by the most restrictive individual license requirement for any boiler in the battery.

6. For regenerative systems, the BHP of the prime mover (gas turbine, engine, etc.) will determine the grade for downstream recovery boilers and steam turbines.

H. All checks of boilers pursuant to the requirements of this Chapter 6.420 shall be logged and recorded as set forth in Section 6.420.110.

<b>Table A for 6.420.100 License Requirements for Operation of Power Boilers and Steam Engines</b>	
<b>Type of Boiler</b>	<b>Minimum License Requirement</b>
<b>A. All Boilers</b>	
0—100 psi and 0—100 kBtuh input	No license required
<b>B. Electric Boilers</b>	
Not exceeding 1.5 cu. ft. and not exceeding 100 psi	No license required
<b>C. All Boilers except Small Power Boilers</b>	
Less than 1,000 kBtuh input each; not certified as Automatic. No more than 2 steam boilers on same header. <sup>1</sup>	Check by a Grade IV Boiler Operator once every two hours
<b>D. Small Power Boilers</b>	
Maximum 800 kBtuh input; not certified as Automatic. No more than 2 steam boilers on same header	Semiannual check by a Grade III Boiler Supervisor and twice daily checks by a Small Power Boiler Operator; or a Small Power Boiler Operator on premises
<b>E. Boilers Certified as Automatic</b>	
1. Maximum 20,000 kBtuh input. No more than 2 steam boilers on same header with a combined capacity no more than 20,000 kBtuh <sup>1</sup>	Check by a Grade IV Boiler Operator once every two hours
2. More than 20,000 to 50,000 kBtuh input	Check by a Grade III Steam Engineer once every two hours
3. More than 50,000 to 300,000 kBtuh input	Check by a Grade II Steam Engineer once every two hours
4. More than 300,000 kBtuh input	Check by a Grade I Steam Engineer once every two hours
<b>F. Boilers Certified as Monitored</b>	
1. Maximum 20,000 kBtuh input. No more than 2 steam boilers on same header with a combined capacity no more than 20,000 kBtuh <sup>1</sup>	Monthly checks by a Grade III Boiler Supervisor and twice daily checks by a Grade IV Boiler Operator
2. More than 20,000 to 50,000 kBtuh input	Monthly checks by a Grade III Boiler Supervisor and twice daily checks by a Grade III Steam Engineer
3. More than 50,000 to 300,000 kBtuh input	Monthly checks by a Grade II Boiler Supervisor and twice daily checks by a Grade II Steam Engineer; or Weekly checks by a Grade II Boiler Supervisor and twice daily checks by a Grade III Steam Engineer.
4. More than 300,000 kBtuh input	Monthly checks by a Grade I Boiler Supervisor and twice daily checks by a Grade I Steam Engineer; or Weekly checks by a Grade I Boiler Supervisor and twice daily checks by a Grade II Steam Engineer.
<b>G. All Other Boilers</b>	
1. Maximum 20,000 kBtuh input. No more than 2 steam boilers on same header with a combined capacity no more than 20,000 kBtuh <sup>1</sup>	Constant attendance by a Grade IV Boiler Operator
2. More than 20,000 to 50,000 kBtuh input	Constant attendance by a Grade III Steam Engineer
3. More than 50,000 to 300,000 kBtuh input	Constant attendance by a Grade II Steam Engineer

<b>Table A for 6.420.100 License Requirements for Operation of Power Boilers and Steam Engines</b>	
<b>Type of Boiler</b>	<b>Minimum License Requirement</b>
4. More than 300,000 kBtuh input	Constant attendance by a Grade I Steam Engineer
<b>H. Steam Engines</b>	
1. Maximum 250 BHP	Constant attendance by a Grade III Steam Engineer or the same attendance requirements as the boiler serving the engine
2. More than 250 to 1,500 BHP	Constant attendance by a Grade II Steam Engineer or the same attendance requirements as the boiler serving the engine
3. More than 1,500 BHP	Constant attendance by a Grade I Steam Engineer or the same attendance requirements as the boiler serving the engine

<b>Table B for 6.420.100 License Requirements for Operation of Low Pressure Boilers</b>	
<b>Type of Boiler</b>	<b>Minimum License Required</b>
<b>A. All types of boilers</b>	
Less than 2,500 kBtuh input	No license required
<b>B. Boilers Not Certified as Automatic or Monitored</b>	
1. 2,500 to 5000 kBtuh max input.	Grade V Boiler Operator on premises
2. More than 5,000 to 20,000 kBtuh max input. No more than 2 steam boilers on same header with a combined capacity no greater than 20,000 kBtuh. <sup>1</sup>	Constant attendance by a Grade IV Boiler Operator
3. More than 20,000 to 50,000 kBtuh max input.	Constant attendance by a Grade III Steam Engineer
4. More than 50,000 to 300,000 kBtuh max input.	Constant attendance by a Grade II Steam Engineer
5. More than 300,000 kBtuh max input.	Constant attendance by a Grade I Steam Engineer
<b>C. Boilers Certified as Automatic</b>	
1. 2,500 to 5000 kBtuh max input	Monthly checks by a Grade III Boiler Supervisor, or quarterly checks by a Grade III Boiler Supervisor and twice daily checks by a Grade V Boiler Operator, or a Grade V Boiler Operator on premises
2. More than 5000 kBtuh to 20,000 kBtuh max input. No more than 2 steam boilers on same header with a combined capacity no more than 20,000 kBtuh <sup>1</sup>	Quarterly checks by a Grade III Boiler Supervisor and twice daily checks by a Grade IV Boiler Operator
3. More than 20,000 kBtuh—50,000 kBtuh max input.	Quarterly checks by a Grade III Boiler Supervisor and twice daily checks by a Grade III Steam Engineer
4. More than 50,000 kBtuh to 300,000 kBtuh max input.	Quarterly checks by a Grade II Boiler Supervisor and twice daily checks by a Grade II Steam Engineer.
5. Over 300,000 kBtuh max input.	Quarterly checks by a Grade I Boiler Supervisor and twice daily checks by a Grade I Steam Engineer

<b>Table B for 6.420.100 License Requirements for Operation of Low Pressure Boilers</b>	
<b>Type of Boiler</b>	<b>Minimum License Required</b>
<b>D. Boilers as Monitored</b>	
1. 2,500 to 5000 kBtuh max input.	Quarterly checks by a Grade III Boiler Supervisor.
2. More than 5,000 to 20,000 kBtuh max input. No more than 2 steam boilers on same header with a combined capacity no more than 20,000 kBtuh <sup>1</sup>	Semiannual checks by a Boiler Supervisor and twice daily checks by a Grade IV Boiler Operator.
3. More than 20,000 to 50,000 kBtuh max input. <sup>1</sup>	Semiannual checks by a Boiler Supervisor and twice daily checks by a Grade III Steam Engineer.
4. More than 50,000 to 300,000 kBtuh max input.	Semiannual checks by a Grade II Boiler Supervisor and twice daily checks by a Grade II Steam Engineer; or Quarterly checks by a Grade II Boiler Supervisor and twice daily checks by a Grade III Steam Engineer.
5. Over 300,000 kBtuh max input.	Semiannual checks by a Grade I Boiler Supervisor and twice daily checks by a Grade I Steam Engineer; or Quarterly checks by a Grade I Boiler Supervisor and twice daily checks by a Grade II Steam Engineer.

**Footnote to Tables A and B for 6.420.100:** A Grade IV Boiler Operator may operate more than two steam or vapor boilers with a greater combined capacity when the operator is the head operator on duty and under the direct on-site supervision of a licensed steam engineer for the purpose of training. The boilers shall not exceed the capacity permitted by the license of the supervising engineer.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.110 Duties of steam engineers and boiler operators**

Licensed steam engineers and boiler operators shall perform the following duties in connection with the operation and maintenance of boilers and steam engines:

A. Test the operation of the boiler and its control and safety devices periodically on a routine basis in accordance with nationally recognized standards and/or boiler and control manufacturer's written recommendations;

B. Maintain and operate the equipment in a safe manner and according to nationally recognized standards such as those recommended by the American Society of Mechanical Engineers for boilers and as adopted by the Director;

C. Prepare and maintain a boiler log book and record, at least daily or as otherwise required by this Chapter 6.420, such pertinent boiler readings and data as may be recommended by the boiler manufacturer, nationally recognized standards, or required by the Boiler Inspector and/or the senior license holder or other authorized person in charge of the boiler operation. The boiler logbook shall be kept on the premises at all times and be available for inspection by the City Boiler Inspector.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.120 Duties of boiler supervisors**

Boiler supervisors shall perform the duties listed in this Section 6.420.120 in connection with the supervision of automatic and monitored boilers.

A. Prepare boiler logbooks with the name, telephone numbers, email address, if any, and home and business addresses of the boiler supervisor on the front cover. The boiler logbooks shall be kept on the premises and be available for inspection by the City Boiler Inspector.

B. Determine the proper light-off, operating, and shutdown procedures and clearly set forth such procedures in the inside front cover of the boiler logbooks. Determine proper firing rate and the set point or operating limits of all safety devices required on automatic or monitored boilers by the Seattle Boiler Code. Boiler supervisors shall clearly mark such set point or limits in the inside back cover of the boiler logbooks.

C. Determine the list of pertinent boiler data entries to be recorded in the boiler logbooks by the boiler owners or the owners' designated representatives and list such entries on the inside back cover. This list shall include such items as any unusual conditions observed, including safety shutdowns, repairs required, adjustments required and adjustments made. All entries shall be made in the boiler logbook and shall include the signature of the person making such readings, observations, or adjustments. It is lawful to cross out words or sentences which should be changed or corrected but erasures are prohibited. The boiler supervisor's written instructions shall include the above signature requirement and the prohibition of erasures.

D. Examine each boiler and boiler logbook in accordance with the frequency of examinations required by Section 6.420.100. Examination shall include the testing of all control devices required for automatic boilers by the Seattle Boiler Code and the testing of monitoring systems when used.

E. If a boiler is a certified monitored boiler as defined in Section 6.420.030:

1. The boiler supervisor shall cause signals to be sent to the monitoring station to test the reliability of the monitoring equipment and the response of the monitoring station.

2. The boiler supervisor shall report all failures of either the equipment or the response to the City Boiler Inspector within 24 hours. Such report shall be in writing.

F. Boiler supervisors shall inspect and test all other controls on the boiler and shall flush the low-water cutoffs, if applicable, to assure that all control devices are in safe and proper operation. They shall permit continued automatic boiler operation only if their examination, inspection, and testing indicate that the boiler is in a safe operating condition.

G. No modification, revisions, or alterations to a boiler or its control devices shall be made except under a boiler supervisor's supervision except:

1. Restoration of control devices to original factory operating conditions at the set point or within the operating limits determined by the boiler supervisor as set forth in the boiler logbook; or

2. Repair or adjustment of the burner system for viscosity changes or to correct fuel-air ratios to restore proper operation at the firing rate indicated in the boiler logbook by the boiler supervisor; or

3. Repair or adjustment of any other system not directly related to the primary safety controls or to the pressure vessel to restore such systems to proper operating conditions. Entries of such repairs or adjustments shall be made in the boiler logbook and shall include the signature of those making such repairs or adjustments.

H. Attend all startups of an automatic boiler out of service after corrective work other than limited adjustments or repairs by others as set forth in subsection 6.420.120.G has been

performed on the boiler, its firing equipment, or its control and safety devices. The boiler supervisor shall remain in constant attendance until:

1. The boiler has reached its preset operating range of pressure; and
2. The primary controls and safety devices have been proved; and
3. The boiler is acceptable to the boiler supervisor for continued operation.

Boiler supervisors are not required to be in attendance during light-off of original boiler equipment being installed by and under the control of the boiler manufacturer or the manufacturer's representative, by a boiler installation contractor or boiler or burner installer making such installation under the manufacturer's written instructions and recommendations. Boiler supervisors are not required to be in attendance during light-off following adjustment or authorized boiler or burner manufacturer alterations made by the above representative, contractor, or installer within the guarantee or warranty time period during which time the representative, contractor, or installer is obligated to render such service. The representative, contractor, or installer shall furnish the boiler supervisor with recommended set points or operating limits of all control devices and recommended firing rates as well as other pertinent data in writing. The representative, contractor, or installer shall record all subsequent changes, adjustments, alterations, or recommendations in the boiler logbook and shall sign the logbook.

I. Provide for a substitute boiler supervisor to attend to boilers in the boiler supervisor's charge when the boiler supervisor is unable to respond to trouble calls. The boiler supervisor shall list the names, email address, if any, home and business telephone numbers, and addresses of substitute boiler supervisors on the front of the boiler logbooks.

J. Respond to trouble calls in accordance with the following:

1. Make verbal contact with the licensed operator, boiler owner, or the owner's representative within two hours of a trouble call from such person, and
2. Have the capability of being present at a boiler site within four hours on a trouble call from that site.

K. A boiler supervisor may not act as both boiler supervisor and the licensed operator except when:

1. The boiler supervisor is a full-time employee of the boiler owner/user; or
2. The licensed operator is unavailable due to vacation, illness, or similar temporary circumstances.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.150 Reporting of defective boilers**

A. Before operating any boiler, steam engineers and boiler operators shall examine the Certificate of Inspection issued for the boiler to see that the certificate is in force. If the certificate has expired, the steam engineer or boiler operator shall notify the steam engineer's or boiler operator's employer. If the certificate has been expired for more than 90 days, the steam engineer or boiler operator shall also notify the City Boiler Inspector of the date of expiration. The steam engineer or boiler operator shall note the pressure allowed by the permit and shall test the operation of the boiler and its control and safety devices for proper operation.

B. Whenever the steam engineer or boiler operator believes any part of a boiler or steam engine to be in defective or potentially unsafe condition, the steam engineer or boiler operator shall report the fact to the steam engineer's or boiler operator's employer in writing. If immediate corrective action is not taken, the steam engineer or boiler operator shall report such defective or potentially unsafe conditions to the City Boiler Inspector.

C. The City Boiler Inspector shall thereupon investigate the defective or potentially unsafe conditions reported under subsection 6.420.150.B, and report any lack of proper care on the part of any licensed person to the employer and the Director.

D. Steam engineers and boiler operators shall report to their employers and to the City Boiler Inspector any damage or injury to any boiler or steam engine under their charge or care which affects the safe operation of the boiler or steam engine. The boiler and any parts thereof shall not be removed or disturbed before an inspection has been made by a department inspector unless for the purpose of saving life. Failure to make such reports shall be sufficient cause for the suspension or revocation of the license of the person in charge.

E. It is the duty of all licensed steam engineers and boiler operators to report serious negligence in the care of boilers and steam engines to their employers and the City Boiler Inspector.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.180 Licenses to be posted or carried**

All licensed steam engineers and boiler operators on duty shall display their licenses in a conspicuous place in the room where the boiler or steam engine is located. Licenses shall be effective only for the operation of the plant where they are displayed. When the posting of their licenses is not practicable, steam engineers and boiler operators shall carry their licenses on their persons, and on demand shall exhibit the licenses. Boiler supervisors shall display legible copies of their licenses in the logbook of each boiler they supervise, pursuant to the requirements of Section 6.420.120.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.190 Posting of regulations**

A copy of this Chapter 6.420 or a condensed version thereof shall be posted by the employer in every boiler and engine room where licensed operators or boiler supervisors are required.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.200 License expiration and renewal**

A. All licenses shall expire at midnight on September 30 of each year.

B. Licenses shall not be transferred or assigned.

C. Licenses may be renewed annually upon payment of the renewal fee. Renewals shall specify the same grade and be subject to such conditions or limitations as may be provided under the license to be renewed. Licensed persons desiring a renewal must also meet the requirements of Section 6.420.060.

D. The Director may refuse to renew a license if the license holder demonstrates neglect or incompetence in the care and operation of boilers pursuant to this code.

E. Licenses that have been expired for more than one year shall not be renewed until the licensee has passed an examination administered in accordance with this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.210 Revocation of license**

A. Any license issued pursuant to this Chapter 6.420 may be revoked by the Director if any of the following is found:

1. The licensee has misrepresented facts related to the operation of any boiler or steam engine;
2. The licensee has provided false information on an application for a license governed by this Chapter 6.420;
3. The licensee fails an examination administered according to Section 6.420.040;
4. The licensee demonstrates neglect or incompetence in the care and operation of boilers pursuant to this code; or
5. The existence of special circumstances that warrant revocation in the interests of public safety and welfare.

Licenses that have been revoked may be reinstated only after the applicant passes an examination administered according to this Chapter 6.420.

B. Whenever the Director determines that there are grounds for revoking a license, the Director may issue a notice of revocation and stop work order. The notice shall be served by personal service in the manner set forth in RCW 4.28.080 for service of a summons or sent by first class mail to the licensee.

C. Unless a request for review before the Director is made in accordance with this Section 6.420.210, the notice shall become the final order of the Director. A request for review is an administrative remedy that must be exhausted before judicial review of the decision may be sought.

D. Any person aggrieved by a notice issued by the Director pursuant to this section may obtain a review of the notice by delivering to the Department such request in writing within ten days of the date of service of the notice. For purposes of this subsection 6.420.210.D, service shall be complete at the time of personal service, or if mailed, three days from the date of mailing. When the last day of the period so computed is a Saturday, Sunday, or federal or City holiday, the period shall run until 5 p.m. on the next business day. The request shall be in writing, and upon receipt of the request, the Director shall notify any persons served the notice of the deadline for submitting additional information in the form of written material for the review, which shall be within ten days after the request is received. Before the deadline for submission of information, any person aggrieved by or interested in the notice (including any persons served the notice) may submit any additional information in the form of written material to the Director for consideration as part of the review.

1. The review will be made by the Steam License Advisory Board. The Steam License Advisory Board will review all additional information received by the submission deadline. The

Board may also request clarification of information received. After review of the additional information, the Steam License Advisory Board may recommend that the Director:

- a. Sustain the notice of revocation;
- b. Withdraw the notice; or
- c. Continue the review to a date certain for receipt of additional information.

2. Recommendations of the Board shall be in writing; shall be mailed to the Director and the appellant; and shall apply only to the case being heard.

3. The Director shall issue an Order and shall cause the same to be sent by first class mail to the person or persons named on the notice and any other person that has requested notice of the decision.

4. Any person who has standing to file an appeal with the Hearing Examiner may file such an appeal within ten days of issuance of the Order of the Director.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.220 Steam License Advisory Board**

A. The Director shall appoint a Steam License Advisory Board consisting of as many as nine members for four-year terms. The terms shall be staggered so that no more than three board members' terms expire in the same year.

B. The Steam License Advisory Board shall consist of up to three persons who are, or have been, licensed as a steam engineer or boiler operator; up to three persons owning boilers or managing boilers for owners; and up to three persons from the general public.

C. The Steam License Advisory Board shall advise and assist the Director in the administration of the steam engineer's and boiler operator's license program. The Director is authorized to define the duties of and prescribe the procedure for the Board. The Steam License Advisory Board may recommend to the Director revisions to this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.240 Inspections**

Licensees shall have their license card available while engaged in the care or operation of any boiler or steam engine and shall present the card at the request of the Director. The Director may conduct periodic inspections of licensees to determine compliance with these regulations.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.250 Stop work orders**

If the Director finds any condition or work is in violation of this Chapter 6.420, the Director may issue a stop work order. The order shall describe the violation in writing. It shall be posted on the premises or served on any person responsible for the condition or work. It is unlawful for any person to engage in or to cause any work subject to the order to be done until authorization from the Director is received.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

## **6.420.260 Notice of violation**

A. Notice. If, after investigation, the Director determines that there has been a violation of this code not resulting in revocation of a license, the Director may serve a notice of violation upon the person responsible for the action or condition. The notice of violation may state the requirements violated, what corrective action, if any, is necessary to comply with the standards or requirements, and set a reasonable time for compliance. The notice may be served upon the responsible person by personal service according to RCW 4.28.080 for service of a summons or by regular first class mail, addressed to the last known address of such person. The notice of violation shall be considered an Order of the Director.

B. Other remedies. Nothing in this Section 6.420.260 shall be deemed to limit or preclude any action or proceeding pursuant to Section 6.420.250, and nothing in this Section 6.420.260 shall be deemed to obligate or require the Director to issue a notice of violation prior to the imposition of civil or criminal penalties.

C. Review by the Director. Any person affected by a notice of violation issued by the Director pursuant to this Chapter 6.420 may obtain a review of the notice by requesting such review in writing within ten days after service of the notice. Service shall be complete at the time of personal service, or if mailed, three days from the date of mailing. When the last day of the period computed is a Saturday, Sunday, or federal or City holiday, the period shall run until 5 p.m. of the next business day. Upon receipt of a request, the Director shall notify the person requesting the review of the date, time, and place of the Director's review. The review shall be not less than ten nor more than 20 days after the request is received, unless otherwise agreed by the person requesting the review. Any person affected by the notice of violation may submit additional information to the Director for consideration on or before the date of the review.

A representative of the Director who is familiar with the case and the applicable regulations will conduct the review. The Director's representative will consider any information presented and in the Department's file. After the review, the Director shall issue an Order of the Director that may:

1. Sustain the notice of violation; or
2. Withdraw the notice of violation; or
3. Amend the notice of violation; or
4. Continue the review to a future date.

The Director shall issue an order within a reasonable time after the conclusion of the review. The Director shall mail the order by regular first-class mail to the person or persons named in the notice of violation.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

## **6.420.270 Penalties**

A. Civil penalties. Any failure to comply with the provisions of this Chapter 6.420 shall be subject to a cumulative civil penalty in an amount not to exceed \$500 per day for each violation from the date the violation occurs or begins until compliance is achieved. The amount of the penalty shall be based upon factors including, but not limited to, severity of violation and history of violations. In cases where the Director has issued a notice of violation, the violation

will be deemed to begin, for purposes of determining the number of days of violation, on the date compliance is required by the notice of violation.

The penalty imposed by this Section 6.420.270 shall be collected by civil action brought in the name of the City. The Director shall notify the City Attorney in writing of the name of any person subject to the penalty, and the City Attorney shall, with the assistance of the Director, take appropriate action to collect the penalty. In any civil action for a penalty, the City has the burden of providing by a preponderance of the evidence that a violation exists or existed; the issuance of the notice of violation or of an order following a review by the Director is not itself evidence that a violation exists.

B. Alternative criminal penalty. Any person who violates or fails to comply with this Chapter 6.420 shall be guilty of a gross misdemeanor subject to the provisions of Chapters 12A.02 and 12A.04, except that absolute liability shall be imposed for such a violation or failure to comply and none of the mental states described in Section 12A.04.030 need be proved. The Director may request the City Attorney to prosecute such violations criminally as an alternative to the civil procedure outlined in this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.280 Additional relief**

The Director may seek legal or equitable relief to enjoin any acts or practices and abate any condition which constitutes a violation of this Chapter 6.420 when civil or criminal penalties are inadequate to effect compliance.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.290 Existing licenses continued**

Anyone holding a license under Chapter 6.420, and in effect on July 6, 2021, shall be entitled to continue to operate under that license subject to all the provisions of this Chapter 6.420.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)

### **6.420.300 Application of other provisions**

The licenses provided for in this Chapter 6.420 are subject to the general provisions of the Seattle License Code set forth in Chapters 6.02 and 6.202. In the event of a conflict between the provisions of Chapters 6.02 and 6.202 and this Chapter 6.420, the provisions of this Chapter 6.420 shall control.

(Ord. 126359, § 1, 2021; Ord. 122115, § 2, 2006.)