



Legislation Text

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CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

AN ORDINANCE relating to the Seattle Boiler and Pressure Vessel Code; amending Section 22.450.010 of the Seattle Municipal Code and amending the Seattle Boiler and Pressure Vessel Code.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.450.010 of the Seattle Municipal Code, last amended by Ordinance 124919, is amended as follows:

22.450.010 Adoption of Seattle Boiler and Pressure Vessel Code

The Seattle Boiler and Pressure Vessel Code is hereby adopted and by this reference made a part of this Subtitle IVB. ~~((A copy))~~ Copies of the Seattle Boiler and Pressure Vessel Code, with amendments, ~~((is))~~ are kept on file at the Seattle Department of Construction and Inspections and in the City Clerk's Office.

Section 2. Section 1 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended as follows:

Section 1 - Administrative

1.1 Title. These regulations shall be known as the "Seattle Boiler and Pressure Vessel Code₂" ~~((;))~~ may be cited as such, and will be referred to herein as "this code."

Section 3. Section 10 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 10))~~ **1.2 Purpose.** The purpose of this code is to ~~((establish and))~~ provide minimum standards for the protection of public health, safety₂ 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.

Section 4. Section 20 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

((Section 20—Scope)) 1.3 General.

1.3.1 Scope. ~~((Other than the exemptions listed in Section 100, the requirements of this))~~ This code ((shall apply)) 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, Installation 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.

Section 5. Section 30 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

((Section 30)) 1.4 Powers and duties of the ((Director)) code official

((30.1)) 1.4.1 General. The code official is hereby authorized to administer ~~((and directed to enforce all the provisions of))~~ and enforce this code. ~~((Compliance with the requirements of this code shall be 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, and not of the City or any of its officers or employees.))~~

- 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.

~~((30.2 Deputies))~~ **1.4.2 Designees.** ~~The ((Director))~~ code official may ((authorize such qualified inspectors or employees as may be necessary to carry out the functions specified in this code)) 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.

~~((30.3))~~ **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 ((Director))~~ code official may enter a building or premises at any reasonable time to perform the duties imposed by the code.

~~((30.4 Stop Orders. Whenever any work is being done contrary to the provisions of this code, or in the event of dangerous or unsafe conditions related to construction or demolition, the Director may order the affected work stopped by a notice describing the violation in writing, posted on the premises or served on any person responsible for the condition or work. It shall be unlawful for any person to engage in or to cause such work to be done until authorization from~~

the Director is received.

30.5 Authority to Disconnect Utilities in Emergencies. The Director shall have the authority to disconnect fuel gas utility service or other energy supplies to a building, structure, premises or equipment regulated by this code in case of emergency where necessary to eliminate an immediate hazard to life or property. The Director may enter any building or premises to disconnect utility service. The Director shall, whenever possible, notify the serving utility, the owner and occupant of the building, structure or premises of the decision to disconnect prior to taking such action, and shall notify such serving utility, owner and occupant of the building, structure or premises in writing of such disconnection immediately thereafter.

30.6 Authority to Condemn Equipment. Whenever the Director ascertains that equipment, or portion thereof, regulated by this code has become hazardous to life, health or property, the Director shall order in writing that such equipment may either be removed or restored to a safe condition, as appropriate. The written notice shall fix a time limit for compliance with such order. Persons shall not use or maintain defective equipment after receiving a notice.

When such equipment or installation is to be disconnected, written notice of the disconnection and causes therefor shall be given within 24 hours to the serving utility, the owner and 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 Director shall institute an appropriate action to prevent, restrain, correct or abate the violation.

30.7 Connection after Order to Disconnect. Persons shall not make connections from an energy, fuel or power supply nor supply energy or fuel to any equipment regulated by this code which has been disconnected or ordered to be disconnected by the Director, or the use of which has been ordered to be discontinued by the Director until the Director authorizes the

~~reconnection and use of such equipment.~~

~~30.8))~~ **1.4.4 Liability.** Nothing ~~((contained))~~ 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 ~~((by reason or in consequence of))~~ 2) any inspection, notice, order, certificate, permission or approval authorized or issued, or 3) ~~((done in connection with))~~ the implementation or enforcement of this code, or 4) ~~((by reason of))~~ 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 ~~((from))~~ 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 Planning and Development))~~ of Construction and Inspections or ~~((the))~~ The City of Seattle be held ~~((as assuming))~~ to have assumed any such liability by reason of the inspections, permits, or certificates ~~((authorized by))~~ issued under this code. ~~((or any 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.

~~((30.9))~~ **1.4.6 Cooperation of other officials and officers.** The ~~((Director))~~ code official may request, and shall receive, so far as is required in the discharge of the code official's ~~((Director's~~)) duties, the assistance and cooperation of ~~((the))~~ The City of Seattle.

Section 6. Section 40 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is

repealed:

~~((Section 40 – Unsafe Equipment and Hazard Correction Order~~

~~**40.1 Unsafe Equipment.** Any equipment regulated by this code, which constitutes a fire or health hazard or is otherwise dangerous to human life is, for the purpose of this section, unsafe. Any use of equipment regulated by this code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is, for the purpose of this section, an unsafe use. Any such unsafe equipment is hereby declared to be a public nuisance and may be abated.~~

~~**40.2 Hazard Correction Order.** Whenever the Director finds that unsafe equipment exists, the Director may issue a hazard correction order specifying the conditions causing the equipment to be unsafe and directing the owner or other persons responsible for the unsafe equipment to correct the condition. In lieu of correction, the owner may submit a report or analysis to the Director analyzing said conditions and establishing that the equipment is, in fact safe. The Director may require that the report or analysis be prepared by a licensed engineer. It shall be unlawful for any person to fail to comply with a hazard correction order as specified in this subsection.))~~

Section 7. Section 50 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is repealed:

~~((Section 50 – Notices~~

~~It shall be unlawful for any person to remove, mutilate, destroy or conceal any lawful notice issued or posted by the Director pursuant to the provisions of this code.~~

~~The Director may record a copy of any order or notice with the Department of Records and Elections of King County.~~

~~The Director may record with the Department of Records and Elections of King County a notification that a permit has expired without a final inspection after reasonable efforts have been made~~

~~to provide a final inspection.))~~

Section 8. Section 60 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is repealed:

~~((Section 60 – Appeals~~

~~Appeals from decisions or actions pertaining to the administration and enforcement of this code shall be addressed to the Director. The appellant may request a review by three or more members of the Construction Codes Advisory Board, convened by the Chair. The issue of the appeal shall be taken into account by the Chair when selecting members to hear an appeal. The results of this appeal shall be advisory only.))~~

Section 9. Section 70 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 70 –))~~ **1.4.7 Rules of the ((Director)) code official.** ~~((70.1 Authority.))~~ The ~~((Director shall have the power to render interpretations of))~~ code official has authority to interpret this code and to adopt and enforce rules and regulations supplemental to this code as may be ~~((deemed))~~ necessary ~~((in order))~~ to clarify the application of ~~((the provisions of))~~ this code. Such interpretations, rules, and regulations shall ~~((be in conformity with))~~ conform to the intent and purpose of this code. ~~((The Director is authorized to promulgate, adopt and issue the following rules:~~

- ~~1. “Building Construction Standards” to promulgate standards which are acceptable as a method or as an alternative design for meeting code required performance criteria, to recognize new technical data affecting code requirements, and to eliminate conflicts among code requirements.~~
- ~~2. “Code Interpretations” to interpret and clarify conditions or language expressed in this code.~~
- ~~3. Any other rule necessary for the administration of the purpose and intent of this code.~~

~~**70.2 Procedure for Adoption of Rules.))**~~

The ~~((Director))~~ code official shall promulgate, adopt, and issue rules ~~((according to))~~ in accordance

with the procedures specified in Chapter 3.02 of the Administrative Code, Seattle Municipal Code.

Section 10. Section 80 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 80))~~ 1.5 Construction Codes Advisory Board.

1.5.1 General. A committee of the Construction Codes Advisory Board may examine proposed administrative rules (~~((, appeals))~~) and amendments relating to (~~((the boiler and pressure vessel))~~) this code and related provisions of other codes and make recommendations to the (~~((Director))~~) code official and to the City Council for changes in (~~((the boiler and pressure vessel))~~) this code. The committee will be called (~~((on an))~~) as needed (~~((basis))~~) by the Construction Codes Advisory Board.

Section 11. Section 90 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 90--))~~ 1.6 Violations, ~~((and Penalties))~~ enforcement, and penalties.

- ~~((90.1))~~ 1.6.1 Violations.** It is a violation of this code for any person (~~((, firm or corporation))~~) to:
- A. Work in violation of code. (~~((install))~~) Install, erect, construct, enlarge, alter, repair, replace, remodel, move, improve, remove, convert or demolish, equip, occupy, use, or maintain any boiler or pressure vessel system or equipment or cause, (~~((or permit))~~) allow, or direct the same to be done in the City, contrary to or in violation of any (~~((of the))~~) provision (~~((s))~~) of this code.
 - B. Unapproved material or devices. (~~((It is a violation of this code for any person, firm or corporation to use))~~) Use any material or (~~((to))~~) install any device, appliance, or equipment which does not comply with (~~((the applicable standards of))~~) this code or which has not been approved by the (~~((Director))~~) code official.
 - C. Operating without a license. (~~((It is a violation of this code to have))~~) Have charge of, (~~((or~~

) operate, or permit any ~~((one))~~ person to have charge of, or operate, any boiler or steam engine regulated by this ~~((Code))~~ code without a license to do so ~~((issued by the Director under))~~ 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.

~~((90.2))~~ **1.6.2 Notice of Violation.** If, after investigation, the ~~((Director))~~ code official determines that standards or requirements of this code have been violated, or that orders or requirements have not been not complied with, the ~~((Director))~~ code official may ~~((serve notice))~~ 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))~~ The standards or requirements violated; ~~((, shall state what))~~
 - 2. What corrective action, if any, is necessary to comply; ~~((with the standards or requirements,))~~ and ~~((shall set))~~

3. Set a reasonable ~~((time))~~ 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 (~~((, registered mail or certified mail with return receipt requested))~~) 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. ~~((The notice of violation shall be considered an order of the Director.))~~ Nothing in this subsection (~~((shall be deemed to))~~) limits or precludes any action or proceeding (~~((pursuant to Sections 30 or 120 of))~~) to enforce this code, and nothing in this section (~~((shall be deemed to))~~) obligates or requires the ~~((Director))~~ code official to issue a notice of violation prior to the imposition of civil or criminal penalties. ~~((in this section.))~~
- 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:

- A. 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
- B. 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 Records and Elections of King County.

~~((90.3))~~ **1.6.10 Civil penalties.** Any person (~~(, firm or corporation)~~) violating or failing to comply with the provisions of this code (~~((shall be))~~) 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 (~~((Director))~~) 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 22.450.010 of the Seattle Municipal Code (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 Revised Code of Washington (RCW) Chapter 36.70C, Judicial Review of Land Use Decisions.
- C. Appeal to Superior Court. Final decisions of the Seattle Municipal Court on enforcement actions authorized by 22.450.010 of the Seattle Municipal Code (SMC) and this code may be appealed pursuant to the Rules for Appeal of Decisions of Courts of Limited Jurisdiction.

~~((90.4 Criminal Penalty))~~ **1.6.11 Alternative criminal penalty.** Anyone ~~((violating or failing))~~ who violates or fails to comply with any notice of violation or order issued by the ~~((Director))~~ code official pursuant to this code or who removes, mutilates, destroys, or conceals a notice or order issued or posted by the ~~((Director))~~ code official shall, upon conviction thereof, be punished by a fine of not more than ~~(((\$1,000))~~ \$5,000 or by imprisonment for not more than ~~((360))~~ 364 days, or by both ~~((such))~~ fines and imprisonment for each separate violation. If the violation continues to exist, each ~~((Each))~~ day ~~(('s))~~ the violation or failure to comply is continued shall constitute a separate offense.

~~((90.5))~~ **1.6.12 Additional Relief.** The ~~((Director))~~ code official may seek legal or equitable

relief to enjoin any acts or practices and abate any condition (~~((which constitutes a violation of this code when civil or criminal penalties are inadequate to effect))~~) 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.

Section 12. Section 100 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 100 – Exemptions from this Code~~

~~The following boilers and pressure vessels and other equipment shall not be required to comply with this code:~~

- ~~A. In other than Group A, E, and I occupancies, listed potable hot water heaters, listed combination hot water heaters, (fired, electric, thermal, solar, and indirect) and listed pool heaters, provided~~

none of the following limitations are exceeded:

A heat input of 200,000 Btu/h, or

A water temperature of 210°F, or

A nominal water-containing capacity of 120 gallons, or

A pressure of 160 pounds per square inch.

- B. ~~In Groups A, E, and I occupancies, listed potable water heaters, listed combination hot water heaters, (fired, electric, thermal, solar, and indirect) and listed pool heaters are required to comply with only Section 230 of this code.~~
- C. ~~Portable unfired pressure vessels subject to regular inspection by State of Washington (RCW 70.79).~~
- D. ~~I.C.C. and D.O.T. regulated containers and/or pressure vessels.~~
- E. ~~Containers for liquefied petroleum gases which are regulated by the Seattle Fire Code.~~
- F. ~~Unfired 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.~~

Exceptions:

- a. ~~Expansion tanks exempted for size in Section 100 of this code shall conform to the requirements of ASME Section IV, HG-709 applicable edition together with applicable addenda.~~
- b. ~~Unfired pressure vessels containing lethal substances are not exempted.~~
- G. ~~Unfired pressure vessels and potable hot water heaters when they are:~~
 - 1. ~~less than 1 ½ cubic feet (11.25 gallons) in volume with safety valve setting of 150 psi or less, or~~
 - 2. ~~less than 6 inches in internal diameter, and less than 5 cubic feet (37.5 gallons) in volume with a safety valve set at any pressure.~~

~~**Exception:** Unfired pressure vessels containing lethal substances are not exempted.~~

- H. Unfired pressure vessels of any size that are protected by approved pressure relief devices set to operate at a pressure not exceeding 15 psi.

~~**Exception:** Pressure vessels receiving condensate capable of flashing to high pressure steam shall comply with Section 350 of this code.~~

- I. Any boiler or pressure vessel subject to regular inspection by federal inspectors or licensed by federal authorities.

- J. Electric boilers that meet all of the following criteria:

1. Having a vessel volume not exceeding one and one-half cubic feet; and
2. Having a maximum allowable working pressure of one hundred (100) psi; and
3. If constructed after June 10, 1994, constructed to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, or listed or otherwise certified by a nationally recognized testing agency or recognized foreign testing laboratory.

- K. ~~Water storage tanks with no air cushion and no energy or heat source.))~~

Section 13. Section 110 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is repealed:

~~**((Section 110 – 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.))~~

Section 14. Section 120 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~**((Section 120 – Application to Existing Boiler and Pressure Vessel Systems**~~

~~**120.1)) 1.7 Existing Installations.**~~

1.7.1 Existing boilers and pressure vessels. Boiler and pressure vessel systems lawfully in existence at the time of the adoption of this code may continue ~~((to be used,))~~ in use at the location approved by permit. The systems may be maintained or repaired, converted to another type of fuel, or have components replaced if the use, maintenance, ~~((or))~~ repair, conversion of fuel, or component replacement is done in accordance with the original code of construction and/or installation requirements design ~~((and location and no hazard to life, health or property has been created by such boiler and pressure system))~~ when approved by the code official.

~~((120.2))~~ **1.7.2 Maintenance of existing installations.** All boiler and pressure vessel systems, materials and appurtenances, and parts, both existing and new, ~~((and all parts thereof))~~ 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 ~~((which are))~~ required by ~~((this code))~~ the Seattle Boiler and Pressure Vessel Code shall be maintained in conformance with the code edition ~~((under which))~~ 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 ~~((shall be))~~ is responsible for maintenance of boiler and pressure vessel systems and equipment. ~~((Boilers and pressure vessels shall be maintained in accordance with the manufacturer's instructions or nationally recognized standards.))~~ To determine compliance with this subsection, the ~~((Director))~~ 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.

~~((120.3))~~ **1.7.3 Changes in ~~((Building or Occupancy))~~ existing building or occupancy.** ~~((~~ Boiler ~~))~~ Existing boiler and pressure vessel systems ~~((which))~~ that are a part of ~~((any))~~ 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 ~~((which may be))~~ 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.

~~((120.4 Historic Buildings and Structures.))~~ **1.7.4 Landmarks.** ~~((Historic buildings and structures.))~~ The ~~((Director))~~ code official may modify the specific requirements of this code as it applies to ~~((buildings and structures designated as))~~ landmarks ~~((of historical or cultural importance))~~ and require in lieu thereof alternate requirements ~~((which))~~ that, in the opinion of the ~~((Director))~~ code official, will result in a reasonable degree of safety to the public and the occupants of those buildings.

~~((A historic building or structure is one which has been designated for preservation by the City Landmarks Preservation Board or the State of Washington, has been listed, or has been determined eligible to be listed, on the National Register of Historic Places, has been officially nominated for such status, or is a structure contributing to the character of a designated landmark or special review district.))~~

Section 15. Section 130 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 130 – Alternate Materials and Methods of Construction))~~ **1.8 Alternative materials, designs, and methods of construction.** This code does not prevent the use of any material, ~~((alternate))~~ alternative design, or method of construction not specifically allowed or prohibited by this code, provided the alternate ~~((has been))~~ is approved and its use is authorized by the ~~((Director))~~ code official.

The ~~((Director))~~ code official may approve an ~~((alternate, provided))~~ alternative if the ~~((Director finds that the))~~ proposed ~~((alternate))~~ alternative complies with the intent of this code and that the ~~((alternate))~~ alternative, when considered together with other safety features of the building or other

relevant circumstances, ~~((will))~~ provides at least an equivalent level of strength, effectiveness, fire resistance, durability, sanitation, and safety.

The ~~((Director))~~ code official may require that sufficient evidence or proof be submitted to reasonably substantiate any claims regarding the use or suitability of the ~~((alternate))~~ 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 ~~((Director))~~ code official may, but is not required to, record the approval of ~~((modifications))~~ alternatives and any relevant information in the files of the ~~((Director))~~ code official or on the approved permit plans.

Section 16. Section 140 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 140--))~~ **1.9 Modifications.** The ~~((Director))~~ code official may modify the requirements of this code for individual cases provided ~~((the Director finds))~~ :

- ~~((1))~~ 1. There ~~((there))~~ are practical difficulties ~~((involved))~~ in ~~((carrying out the provisions))~~ complying with the requirements of this code;
- ~~((2))~~ 2. The ~~((the))~~ modification is in conformity with the intent and purpose of this code; and
- ~~((3))~~ 3. The ~~((the))~~ modification ~~((will))~~ provides a reasonable level of strength, effectiveness, fire ~~((protection and structural integrity))~~ resistance, durability, sanitation, and safety when considered together with other safety features of the building or other relevant circumstances.

The ~~((Director))~~ code official may, but is not required to, record the approval of modifications and any relevant information in the files of the ~~((Director))~~ code official or on the approved ~~((permit plans))~~ set of construction documents.

Section 17. Section 150 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance

121865, is amended and renumbered as follows:

~~((Section 150--))~~ **1.10 Tests.** ~~((Whenever))~~ If there is insufficient evidence of compliance with the ((provisions)) requirements of this code, or evidence that a material or method does not conform to the requirements of this code, ((or in order to substantiate claims for alternate materials or methods,)) the ((Director)) code official may require that tests, as ((evidence)) proof of compliance, ((to)) be made at no expense to the City. Test methods shall be ((as)) those specified in this code or by other recognized test standards. ((In the absence of)) If there are no recognized and accepted test methods for the proposed alternative or modification, the ((Director)) code official shall ((specify the required testing or examination methods and)) determine the test procedures. ((Tests)) All tests shall be ((performed)) made by an agency approved by the ((Director)) code official. ((Reports)) The agency shall provide a report of tests or examination results, and those results shall be retained by the ((Director)) code official for the period required for retention of public records.

Section 18. Section 160 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

Section ~~((160))~~ 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. ~~((Certain words and terms used in this code, unless clearly inconsistent with their context, shall have the meanings given below. When a definition is not found below, the definitions of the American Society of Mechanical Engineers' CSD-1 1998. Controls and Safety Devices for Automatically Fired Boilers (CSD-1, see Section 170) shall be used.)) 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 ~~((the International))~~ Seattle Building Code ((Section 303.1)) Chapter 3.

ACCESSIBLE ~~((is))~~ means having access to ~~((but which first may require))~~ and includes the removal of an access panel, door, or similar obstruction ~~((covering the item described))~~ designed for removal.

ACCESSIBLE, READILY ~~((, is))~~ means capable of being reached safely and quickly for operation, repair, or inspection without ~~((requiring those to whom ready access is requisite to climb))~~ climbing over or ~~((remove))~~ removing obstacles, or ~~((to resort))~~ resorting to the use of portable access equipment.

APPLIANCE ~~((is))~~ means a device which utilizes fuel or other forms of energy to produce light, heat, power, refrigeration or air conditioning, ~~((This definition includes))~~ including vented decorative appliances.

APPROVED ~~((is approval))~~ means accepted by the ~~((Director))~~ code official.

APPROVED AGENCY ~~((is an established and recognized))~~ means an agency approved by the code official that is regularly engaged in conducting tests, examinations, or furnishing inspection services, ((when such agency has been approved by the Director.))

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 Fireman License Law, Seattle Municipal Code Chapter 6.420.)

“B” OCCUPANCIES are business uses, such as offices. Details can be found in ~~((the International))~~ Seattle Building Code ((Section 304.1)) Chapter 3.

BOILER ~~((is))~~ 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 shall also include) including fired units for heating or vaporizing liquids other than water where these systems are complete within themselves.

BOILER ROOM ~~((is))~~ means any room primarily used to house a boiler.

BOILER, CERTIFIED AS AUTOMATIC ~~((is either a boiler installed prior to the adoption of CSD-1 which complies with Section 320 and Table 320-A of this code and for which an automatic certification installation permit has been finalized, or any other boiler installed after the adoption of CSD-1 for which an automatic certification permit has been finalized which is used to modify the licensed attendance requirements for specific boiler(s)))~~ 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 Fireman License Law”, Seattle Municipal Code Chapter 6.420.)

BOILER, CERTIFIED AS MONITORED ~~((is))~~ means a boiler ~~((which))~~ that complies with ~~((the provisions of Section 320 and Section 330))~~ Section 4.26 of this code ~~((which))~~ and is used to modify the licensed ~~((attendance))~~ attendant requirements for a specific ~~((boilers))~~ boiler. (See “Steam Engineer and Boiler Fireman License Law”, Seattle Municipal Code Chapter 6.420.)

~~((BOILER, CONDENSING is a boiler which condenses part of the water vapor generated by the burning of hydrogen in fuels.))~~

BOILER, HOT-WATER SUPPLY ~~((is a))~~ means a listed potable water boiler, exceeding ~~((any of))~~

the limitations of ~~((Section 100 paragraph A))~~ a potable hot water heater, but ~~((not exceeding))~~ that does not exceed a pressure of 160 psi (1100 kPa) or a temperature of 250 ~~((°F.))~~ degrees F (121 ~~((°))~~ degrees C), that provides hot water to be used externally to itself.

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

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

~~((BOILER, NON CODE is a boiler not constructed in accordance with the codes listed in Section 170 of this code.~~

~~**BOILER, PACKAGE** is any class of boiler defined herein and shall be a boiler equipped and shipped listed as a boiler burner unit complete with fuel-burning equipment, automatic controls and accessories, and mechanical draft equipment, if used.))~~

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

BOILER, POWER ~~((is))~~ means a boiler ~~((in which))~~ that generates steam or vapor ~~((is generated))~~ at pressures exceeding 15 psi.

BOILER, RENTAL ~~((is))~~ 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 ~~((shall mean))~~ means any boiler ~~((that is to be))~~ installed in Seattle that ~~((has been))~~ was in ~~((any))~~ previous service.

BUILDING CODE ~~((is))~~ means the Seattle Building Code.

BURNER ~~((is))~~ means a device ~~((to))~~ that conveys fuel and air ~~((/))~~ or steam into the combustion chamber of a boiler ~~((and))~~ to cause and maintain stable combustion.

CHIMNEY ~~((is))~~ 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 ~~((is))~~ means the air necessary for complete combustion of a fuel, including theoretical air and excess air.

~~((CONFINED SPACE is a room or space having a volume less than 50 cubic feet per 1,000 Btu/h (4.83 L/W) of the aggregate input rating of all fuel-burning appliances installed in that space.))~~

DEPARTMENT means the Seattle Department of Construction and Inspections.

~~((DIRECT-VENT APPLIANCES are appliances which are constructed and installed so that all air for combustion is derived from the outside atmosphere and all flue gases are discharged to the outside atmosphere.))~~

DIRECTOR is the Director of the Department of Planning and Development and the Director's authorized representatives.))

DRAFT HOOD ~~((is))~~ 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 ~~((is))~~ means a tube or conduit for ~~((transmission of))~~ conveying air. ~~((This definition shall not include the air passages of listed self-contained systems.))~~ 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 ~~((International))~~ Seattle Building Code ~~((Section 305))~~ 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 ~~((International))~~ Seattle Building Code ~~((Section 306))~~ Chapter 3.

FIRE CODE is the Seattle Fire Code.

FUEL TRAIN ~~((is))~~ 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 ~~((International))~~ Seattle Building Code ~~((Section 307))~~ Chapter 3.

HOT 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.

HOT 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.

HOT 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.

“**I**” OCCUPANCIES are medical and institutional facilities. Details can be found in ~~((International))~~ Seattle Building Code ~~((Section 308))~~ Chapter 3.

INSPECTOR ~~((, depending on context, is))~~ means any of the inspector types defined by this code, ~~((as appropriate))~~ 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 ~~((is))~~ means the chief pressure systems inspector appointed by the ~~((Director))~~ code official.

INSPECTOR, CITY ~~((is))~~ means an inspector employed by the ~~((City of Seattle))~~ Department.

INSPECTOR, INSURANCE ~~((is))~~ means an inspector employed by an ~~((Authorized Insurance Company))~~ authorized insurance company as defined in this code.

INSURANCE COMPANY, AUTHORIZED ~~((is))~~ 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.

~~((JOINT, BRAZED, is a joint obtained by joining of metal parts with alloys which melt at temperatures higher than 1000°F. (538°C.) but lower than the melting temperature of the parts being joined.~~

~~JOINT, SOLDERED is a gas-tight joint obtained by the joining of metal parts with metallic mixtures of alloys which melt at a temperature below 1000°F. (538°C.) and above 400°F. (204°C.).)~~

LETHAL SUBSTANCES ((are)) means a poisonous ((gases or liquids of such a nature)) 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 ((his)) 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 ((is)) means a person licensed to operate boilers in accordance with the Seattle Steam Engineer and Boiler Fireman License Law, SMC Chapter 6.420.

LISTED ((is)) means that equipment, ((appliances or)) materials, products, or services are included in a list published by ((a nationally recognized testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment,

~~appliances or materials, and whose listing states either that the equipment, appliances or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner. Not all testing laboratories, inspection agencies and other organizations concerned with product evaluation use the same means for identifying listed equipment, appliances or materials. Some do not recognize equipment, appliances or materials as listed unless they are also labeled. The authority having jurisdiction shall utilize the system employed by the listing organization to identify a listed product.)) 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 ~~((International))~~ Seattle Building Code ((Section 309)) Chapter 3.

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

~~((NONCOMBUSTIBLE MATERIALS are materials that, when tested in accordance with ASTM E 136, have at least three of four specimens tested meeting all of the following criteria:~~

- ~~1. The recorded temperature of the surface and interior thermocouples shall not at any time during the test rise more than 54°F (30°C) above the furnace temperature at the beginning of the test.~~
- ~~2. There shall not be flaming from the specimen after the first 30 seconds.~~
- ~~3. If the weight loss of the specimen during testing exceeds 50 percent, the recorded temperature of the surface and interior thermocouples shall not at any time during the test rise above the furnace air temperature at the beginning of the test, and there shall not be flaming of the specimen.))~~

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 ~~((is))~~ means a small burner that is used to light ~~((off))~~ (ignite) the main burner.

PILOT, CONTINUOUS (also known as constant burning pilot) ~~((is))~~ 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 ~~((is))~~ means a pilot that is automatically lighted each time there is a call for heat ~~((-It))~~ and burns during the entire period the main burner is firing.

PILOT, INTERRUPTED ~~((is))~~ means a pilot that is automatically lighted each time there is a call for heat. The pilot fuel is cut off automatically ~~((at the end of))~~ once the main burner flame ~~((-establishing period))~~ is ignited.

~~((POTABLE WATER HEATERS (FIRED, ELECTRIC, THERMAL, SOLAR, AND INDIRECT) are closed vessels, listed to a recognized listing agency, in which potable water is heated by the combustion of fuels, electricity, or any other source, and withdrawn for use external to the system and which do not exceed any of the following: A heat input of 200,000 Btu/h, or a water temperature of 210° F, or a nominal water-containing capacity of 120 gallons, or a pressure of 160 pounds per square inch.))~~

PRESSURE VESSEL ~~((is))~~ means a closed unfired container under internal pressure.

~~((PRESSURE VESSEL, NON CODE, is a pressure vessel not constructed in accordance with the codes listed in Section 170 of this code.))~~

PRESSURE VESSEL, USED ~~((shall))~~ means any pressure vessel that is ~~((to be))~~ installed in Seattle that ~~((has been))~~ was in ~~((any previous))~~ service at a previous time.

PURGE ~~((is))~~ means to ~~((clear of))~~ 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 ~~((International))~~ Seattle Building Code ((Section 310)) Chapter 3.

“S” OCCUPANCIES are storage facilities. Details can be found in ~~((International))~~ Seattle Building Code ((Section 311)) Chapter 3.

“U” OCCUPANCIES are accessory utility facilities such as private garages and ~~((sheds))~~ greenhouses. Details can be found in ~~((International))~~ Seattle Building Code ((Section 312)) Chapter 3.

~~((UNCONFINED SPACE is a room or space having a volume equal to at least 50 cubic feet per 1,000 Btu/h (4.831 L/W) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.))~~

VENT ~~((is))~~ 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 ~~((is))~~ means the pipe that connects an approved fuel-fired appliance to a vent. Section 19. Section 170 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance

121865, is amended and renumbered as follows:

Section ~~((170))~~ 3 - ~~((Construction and))~~ Applicable Installation ((Code Requirements)) 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 below.

~~((170.1 The construction of boilers and pressure vessels and the installation thereof shall conform to the minimum requirements for safety from structural and mechanical failure and excessive pressures. When any conflict exists))~~

A. Where differences occur between ((referenced codes in this section and)) the requirements of this code and the codes and standards referenced in Sections 3.1.1.A through 3.1.1.E, the ((requirements)) provisions of this code ((shall prevail)) apply.

((170.2)) 3.1.1 Applicable codes and standards. ~~((Boilers and pressure vessels installed in the City of Seattle shall comply with))~~

A. The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Sections I, III, IV, VIII, X, and PVHO-1, ((of the American Society of Mechanical Engineers' (A.S.M.E.) Boiler and Pressure Vessel Code and the))

B. The American National Standards Institute ((A.N.S.I.)) ANSI B31.1.0 Power Piping Code, ((, together with addenda thereto. Boilers and pressure vessels shall comply with the edition of the code in effect at the time the equipment was manufactured. Where this code calls for construction in accordance with any Section of the A.S.M.E. Boiler and Pressure Vessel Code, the exemptions listed in Section 100 of this code shall prevail over any and all exemptions listed in any Section of the A.S.M.E. Code. Appurtenances that are not within the scope of the A.S.M.E. codes may be constructed to a nationally recognized standard of construction that has been approved by the Director.))

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.

~~((170.3 A.S.M.E. CSD-1-2002. Except as otherwise stated herein, all fossil fuel fired boiler installations with fuel input ratings of less than 12,500,000 Btu/hr shall comply with the fuel train requirements of A.S.M.E. CSD-1-2002, Controls and Safety Devices for Automatically Fired Boilers (CSD-1), which requirements are hereby adopted and incorporated by reference. Alterations/modifications of existing burner controls require compliance of the entire fuel train with CSD-1.~~

~~**170.4 Seattle Modifications to CSD-1.** CSD-1 is modified as follows:~~

- ~~A. CG-110 Scope, paragraph (b). Chapter 100-A of this code exempts some pool heaters. Those not exempted are not required to comply with CSD-1, but shall comply with all other requirements of this code.~~
- ~~B. CG-130 Exclusions. Installations of potable hot water heaters and lined hot water supply boilers are not required to comply with CSD-1. However, installation of lined hot water supply boilers shall comply with all other requirements of this code.~~
- ~~C. CG-220 Installation. CG-220 is adopted with the following modifications or clarifications:
 - ~~1. Installation of boilers and burners, and certification of boilers as automatic or monitored shall be done only under permit in compliance with the requirements of Sections 220, 320, and 330 of this code.~~
 - ~~2. When the burner of an existing installation is replaced, or the existing controls of a boiler have been altered or modified, the entire fuel train shall comply with CSD-1.~~
 - ~~3. The requirements of Section 360 of this code shall apply in full.~~~~

4. ~~Under paragraph (d): when modules of a modular boiler are replaced, the replacement shall also comply with the requirements of this code.~~
- D. ~~CG-260 Combustion Air. CG-260 is replaced in its entirety by the requirements of Section 290 of this code and the Seattle Mechanical Code. The following shall apply when combustion air is provided by means other than natural air circulation:~~
1. ~~Louvers and grilles that are not fixed in the full open position shall be interlocked with the boiler(s) so that the boiler(s) will not start the pre-purge cycle unless the louvers/grilles are in the full open position. The interlock shall be placed on the driven member.~~
 2. ~~Fans supplying air to the boiler room for combustion shall be interlocked with the burner so that air flow is proven during boiler operation.~~
 3. ~~Fire dampers shall not be installed in the combustion air supply to the boiler room.~~
- E. ~~CG-320 Installation. CG-320 is adopted with the following modification: Installation of boilers and burners, and certification of boilers as automatic or monitored for the purpose of modifying licensed operator attendance shall be done only under permit in compliance with the requirements of Section 220, Section 320, and Section 330 of this code.~~
- F. ~~CG-610 Lockout. CG-610 is adopted with the following addition to the end of paragraph CG-610: Resetting of safety controls from a place other than the boiler on which the safety device is installed is prohibited.~~
- G. ~~Part CF – Combustion Side Control. Part CF is adopted with the following additions:~~
1. ~~Fuel Piping: The fuel piping requirements of the Seattle Mechanical Code shall take precedence over the requirements of CSD-1.~~
 2. ~~Boilers Certified as Automatic shall comply with the requirements of Sections 220 and 320 of this code.~~

~~170.5 NFPA 85. Boilers with fuel input ratings of 12,500,000 btu/hour or more shall comply with the fuel train requirements of NFPA 85 2004 edition together with applicable addenda.~~

~~170.6 Appurtenances such as safety controls, operating controls, burner assemblies, and boiler burner assemblies shall be listed by a nationally recognized testing agency and shall be installed in accordance with the requirements of the listing.~~

~~170.7 Boilers and pressure vessels shall comply with applicable requirements of the Seattle Energy Code.))~~

Section 20. Section 180 of the Seattle Boiler and Pressure Vessel Code, enacted by Ordinance 117723, is amended and renumbered as follows:

~~((Section 180 – Registration Requirements))~~ **3.3 Symbol of construction and registration.** ~~((All boilers))~~ 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 ((s)): ~~((1))~~ Cast iron boilers and ~~((2-Pressure))~~ pressure vessels bearing the ~~((A.S.M.E.))~~ ASME ~~((“))~~ UM ~~((“))~~ stamp.

Section 21. Section 190 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~Section ((190 – Permits Required))~~ **4 - Installation Permits**

~~((190.1))~~ **4.1 Installation permits required.** Except as otherwise specifically provided in this code, ~~((A))~~ a permit shall be obtained from the ~~((Director))~~ 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. Alteration or 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.

4.2 Exemption from installation permits. A City installation permit is not required for the following boilers, pressure vessels, and other equipment:

1. Portable unfired pressure vessels that are inspected by the State of Washington as required by RCW Chapter 70.79;
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. Water storage tanks with no air cushion and no energy or heat source;
5. 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 (RCW Chapter 70.79) and have a current Washington State certificate to operate; and
6. Potable hot water heaters.

Note: In Group A, E, and I occupancies a bi-annual in-service inspection of all potable hot water heaters is required even in cases where a King County plumbing installation permit was required for projects in Seattle City limits.

~~(190.2)~~ 4.3 Application for installation permit. To obtain an installation permit, the applicant shall first file an application (~~(in writing on a form furnished by the Director for that purpose)~~) 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 ~~((definitely))~~ definitively locate the proposed building or work.
3. Be accompanied by ~~((plans))~~ construction documents and/or specifications in the standard ~~((A.S.M.E.))~~ 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. ~~((Indicate))~~ Include the names, addresses, and phone numbers of the boiler owner, general contractor, and ~~((the name, address and phone number of a))~~ any other contractor or contact persons.
6. ~~((Give))~~ Provide additional ~~((such other))~~ data and information, including but not limited to the manufacturer name and serial number, as may be required by the ~~((Director))~~ code official.

~~((190.3))~~ **4.4 ((Plans and Specifications)) Construction documents.** The ~~((Director))~~ code official may require that one or more sets of construction documents including plans, computations, and specifications ~~((to))~~ be prepared and submitted to the ~~((Director))~~ 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 ~~((of sufficient clarity to))~~ sufficiently clear for electronic storage and shall show that the proposed installation ~~((will))~~ conforms to the provisions of this code and to the provisions of all applicable laws, ordinances, rules, regulations, and orders.

~~((190.4))~~ **4.5 Emergency ((Repairs)) repairs.** In the case of an emergency, the installation, alteration, or repair of any boiler or pressure vessel system or equipment may be made without first applying for a

permit. ~~((provided that notice))~~ The code official shall be given notice by email or voicemail of the work ((being)) performed ((shall be given to the Director)) within ((twenty-four)) 24 hours or ((within)) one ~~((working))~~ business day from the time when the emergency work was started.

~~((Depending on the nature of the emergency, appropriate permits))~~ Permit applications shall be ~~((obtained))~~ submitted within ~~((five days of))~~ the later of 24 hours or one working day from the start of the emergency work or as directed by the ((Director)) code official.

~~((190.5 Permit Issuance))~~ **4.6 Application review and permit issuance.** ~~((190.5.1 General.))~~ The application ~~((, plans, specifications, and other data filed by an applicant for permit))~~ shall be reviewed by the ~~((Director))~~ code official or designee. The application ~~((Such plans))~~ 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. ~~((If the Director finds that))~~ The code official shall issue a permit to the applicant if the code official finds the following:

- A. ~~((the))~~ The work ((as)) described in ((an)) the application, ((for a permit and the plans, specifications and other data filed therewith)) 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; ((and that))
- B. ~~((the))~~ The permit fees specified in ((the Permit Fee Subtitle)) Seattle Municipal Code, Title 22, Subtitle IX, Permit Fees, commonly known as the Fee Subtitle, have been paid; and
- C. 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. ((the Director shall issue a permit therefor to the applicant, who))

When the permit is issued, the applicant or the applicant's authorized agent becomes the permit

holder ((or authorized agent)).

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 equipment or system. 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.

~~((190.5.2))~~ **4.7 Validity of permit.** The issuance or granting of a permit or approval of ~~((plans))~~ construction documents shall:

1. ~~((not))~~ Not be construed to be a permit for, or an approval of, any violation of any ~~((of the))~~ provisions of this code or any other pertinent laws and ordinances.
2. ~~((No permit presuming to give authority to violate or cancel the provisions of this code shall be valid, except insofar as the work or use which it authorizes is lawful.))~~ 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. ~~((The issuance of a permit shall not))~~ Not prevent the ~~((Director))~~ code official from ~~((thereafter))~~ 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. ~~((The issuance of a permit shall not prevent the Director from requiring correction of conditions found to be in violation of this code or other pertinent laws of the City, nor shall))~~ Not be construed to extend the period of time for which any such permit is issued ~~((be construed to extend))~~ or otherwise affect any period of time for compliance specified in any notice or order issued by the ~~((Director))~~ code official or other administrative authority requiring the correction of any such conditions.

~~((190.6))~~ **4.8 Permit Expiration.** ~~((190.6.1 Expiration. Every permit issued by the Director under the provisions of this code shall))~~ 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 which))~~ permits that expire in less than ~~((eighteen))~~ 18 months ~~((may be issued where the Director))~~ if the code official determines a shorter period is appropriate to complete the work.

~~((190.6.2))~~ **4.9 Renewal of Permits.** ~~((Each permit))~~ Permits may be renewed ~~((one time))~~ and renewed permits may be further renewed by the code official, ~~((provided))~~ if the following conditions are met:

1. Application for renewal ~~((shall be))~~ is made within the ~~((thirty))~~ 30-day period immediately preceding the ~~((date of))~~ expiration date of the permit; and
2. ~~((The work authorized by the permit has been started and is progressing at a rate approved by the Director.))~~ 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. ~~((Permits may also be renewed where commencement))~~ 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.

~~((190.6.3 Suspension or Revocation. The Director may, by written order, suspend or revoke a permit issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied or in violation of any ordinances or regulations or any provisions of this code.))~~

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:

- A. 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
- B. 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.

Section 22. Section 200 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 200)) **4.12 Fees.** ((200.1 General. A fee for each permit and for other activities related to the enforcement of this code shall be paid as set forth in the Permit Fee Subtitles. Fees for the inspection of repairs or alterations of boilers and pressure vessels are charged in half hour increments at the rate set in the Permit Fee Subtitle. DPD will send an invoice for the repair following completion of the work.))~~ 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.

Section 23. Section 210 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 210)) **4.13 Inspections;** ((-)) **General.**~~

~~((210.1 General.)) **4.13.1 Inspection of work.**~~ Boiler and pressure vessel systems for which a

permit is required by this code shall be subject to inspection by the ~~((Director))~~ code official.

~~((It shall be the duty of the permit applicant to cause the boiler and pressure vessel systems to remain accessible and exposed for inspection purposes. Neither the Director nor the City shall be liable for expense entailed in the removal or replacement of any material required to permit inspection. When the installation of a boiler and pressure vessel system is complete, an additional and final inspection shall be made by the Director. Boiler and pressure vessel systems regulated by this code shall not be connected to the energy fuel supply lines until authorized by the Director.))~~

4.13.2 Approval in error. Approval ~~((as a result of))~~ 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.

~~**(210.2 Reinspections.** The Director may require a reinspection when work for which inspection is called is not complete, corrections called for are not made, the inspection record is not properly posted on the work site, the approved plans are not readily available to the inspector, deviations from plans which require the approval of the Director have been made without proper approval, or for failure to provide access on the date for which inspection is requested.~~

~~The Director may assess a reinspection fee as set forth in the Permit Fee Subtitle for any action listed above for which reinspection may be required, whether or not a reinspection is actually performed.~~

~~In instances where reinspection fees have been assessed, no additional inspection of the work shall be performed until the required fees have been paid.))~~

4.13.3 Inspector qualifications. City-employed inspectors holding a current inspector's commission with the National Board of Boiler and Pressure Vessel Inspectors may conduct the

required inspections and shall 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.

4.13.4. Responsibility for inspection requests. It is the duty of the owner of the property or the owner's authorized agent, or the person designated by the owner or agent to do the work authorized by a permit, 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. ~~Boiler and pressure vessel systems regulated by this code shall not be connected to the energy fuel supply lines until authorized by the Director.~~

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, pressure vessel, or related system is complete, a final inspection shall be performed approving the boiler, pressure vessel, or 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.

Section 24. Section 220 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 220))~~ 4.14 ((Inspection)) Requirements ((-New Installations)) for new installations.

1. On-site. The code official shall require:
 - ~~((220.1))~~ A. Boiler installations ((upon completion shall have)) to have equipment controls set, adjusted, and tested by the installing contractor upon completion.
 - B. ((Documentation)) The following documentation to be on site and available to the inspector upon request: ((consisting of City of Seattle Installation Permit)) 1) the Department issued installation permit, 2) National Board or ASME Data Report (s), ((CSD-1 Report(s), complete control diagram of a permanent legible type, together with complete boiler operating)) and 3) manufacturer's installation and operation instructions. ((, shall be furnished by the installer for each installation. Rental boilers and used boilers are subject to hydrostatic testing, non-destructive testing, or other special testing as may be required by the Director.
 - ~~220.2))~~ C. ((It shall be the duty of the person or entity doing the work or installation authorized by a permit to notify the Director that such work or installation is ready for inspection and to prevent unauthorized use of equipment until such use has been authorized by the Director. The Director shall require such tests as

~~he/she deems)) 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 ((Director's authorized representative)) code official.~~

~~D. ((It shall be the duty of the person requesting inspections required by this code to provide access)) Access to, and the means for, ((the)) safe inspection of the installation.~~

~~((220.3 When the owner or his authorized representative requests inspection of a boiler prior to its installation, the Director shall make such inspection. Additional inspection(s), or inspections outside the scope of the permit may be subject to additional fees in accordance with Section 200 of this code.))~~

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.

Section 25. Section 230 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 230 – Existing Installations – Reinspection~~

~~The Director shall inspect all boilers and pressure vessels operated under permit at such intervals as deemed necessary but in no event less frequently than noted below:~~

~~**Exception:** Boilers and pressure vessels under the direct ownership and operation of the State of Washington shall be installed in accordance with section 190 of this code, but are exempt from the re-inspection requirements of this code.~~

~~**230.1** Inspection of boilers, boiler controls, and boiler safety devices shall be as follows:~~

~~A. External Inspections: All boilers shall be inspected externally annually. All required boiler controls and safety devices shall be tested during the external inspection to determine that they are operating properly.~~

- B. ~~Internal Inspections: Where construction and operating conditions permit, boilers shall also be subject to an internal inspection as follows:~~
- ~~1. Low pressure hot water heating boilers not using corrosion inhibitors shall be inspected internally at least every two years.~~
 - ~~2. Low pressure hot water heating boilers using corrosion inhibitors, glycol, or oil shall be inspected at a frequency determined by the inspector depending upon such factors as history of the installation, adequacy of corrosion inhibitors, tightness of the system, and other factors observed and considered by the inspector; and~~
 - ~~3. All other boilers shall be inspected every year.~~
- C. ~~For steam boilers, an internal inspection of the low water cutoff chamber and connecting piping is required in all cases.~~

~~**230.2** Unfired pressure vessels shall be inspected externally biennially. When subject to corrosion and construction permits, they shall, in addition, be subject to inspection internally biennially. At the discretion of the inspector, an ultrasonic examination of the external side of the pressure vessel may substitute for an internal inspection.~~

~~**230.3** In Group A, E, or I Occupancies, potable water heaters, combination hot water heaters, (fired, electric, thermal, solar, and indirect) and pool heaters shall be inspected externally biennially for safe condition. As a minimum, the safety inspection shall consist of an actual lifting of the safety relief try lever to determine free flow of the safety relief valve and a visual inspection of the exterior of the vessel for leakage or physical damage.~~

~~**230.4 Inspection Results – Corrections Required.** The inspector shall notify the owner or authorized representative of the found defects or deficiencies which shall be promptly and properly corrected. If such corrections are not made, or if the operation of the boiler or pressure vessel is deemed unsafe by the Director, the permit to operate the boiler or pressure vessel shall be withheld until corrections have~~

been made.

230.5 Inspection by Authorized Insurance Companies. ~~Inspection of boilers and pressure vessels may be made by employees of an authorized insurance company. Such inspections shall be conducted in accordance with the requirements of this code and by persons holding an active commission from the National Board of Boiler and Pressure Vessel Inspectors.~~

- ~~1. Authorized insurance companies must notify the Director in writing, annually, of those inspectors that will be conducting inspections within the City of Seattle. Notification shall include the National Board Commission number and expiration of the inspectors current National Board Commission. Notification in writing may be on company letter head or by email. Authorization is subject to the approval of the Director.~~
- ~~2. Authorized inspectors shall make their reports to the Director on forms prescribed by the Director.~~
- ~~3. Authorized Insurance company inspectors shall notify the Director immediately of any suspension of insurance coverage due to dangerous conditions.~~
- ~~4. Authorized insurance companies providing insurance coverage of jurisdictional objects in the City of Seattle shall notify this office within 30 days for any new insurance in effect or any discontinuance of insurance coverage of jurisdictional objects.~~

230.6 Preparation for Internal Inspection.

~~230.6.1 The owner or user shall prepare a boiler or pressure vessel for internal inspection by either the Director or insuring company to the extent deemed necessary by the inspector. For boilers, a typical preparation may include the following:~~

- ~~a) Water shall be drawn off and the boiler thoroughly washed.~~
- ~~b) Manhole and handhole plates and wash out plugs and water column connections shall be removed, the furnace and combustion chambers thoroughly cooled and cleaned.~~

- e) ~~All grates of internally fired boilers shall be removed.~~
- d) ~~As required by the inspector, at each annual inspection, brickwork and/or refractory shall be removed in order to determine the condition of the boiler headers, furnace, supports or other parts.~~
- e) ~~Any leakage of steam or hot water into the boiler shall be cut off by disconnecting the pipe or valve at the most convenient point.~~
- f) ~~The low water cutout shall be disassembled to such a degree as the inspector shall require.~~
- g) ~~Compliance with applicable lock-out / tag-out and confined space entry procedures as required.~~

~~**230.6.2** 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 and the certificate of inspection shall be withheld or canceled until the owner or user complies with the requirements.~~

~~))~~

Section 26. Section 240 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~**((Section 240 – Certificate of Inspection**~~

~~It shall be unlawful to operate any boiler or pressure vessel without first obtaining a valid certificate of inspection from the Director. Certificates of Inspection shall be displayed in a conspicuous place adjacent to boiler or vessel. The Certificate of Inspection shall not be issued until the equipment has been inspected and approved by the Director. A grace period of no longer than sixty (60) days beyond the expiration date of any Certificate of Inspection may be granted.~~

~~**Exceptions:**~~

- ~~1. The operation of 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.~~

2. ~~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, (RCW 70.79) and in possession of a current Washington State Certificate to Operate.)~~

Section 27. Section 250 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~**((Section 250 – Repairs and Alterations**~~

~~**250.1** Where a repair is necessary or an alteration as defined in the National Board Inspection Code is desired, a City inspector shall be called for authorization prior to starting any work on the alteration or the repair. Completed repairs and alterations shall be subject to the approval of the inspector and the approval of the inspector responsible for in-service inspection, as applicable.~~

~~**250.2** Repairs and/or alterations to all boilers, unfired pressure vessels, and their appurtenances shall conform to the rules contained in the National Board Inspection Code (A.N.S.I.-NB-23) wherever they apply. Repairs or alterations outside the scope of the National Board Inspection Code are subject to the prior approval of the director.)~~

Section 28. Section 260 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~**((Section 260 – Removal from Service – Dangerous Conditions**~~

~~If the operation of a boiler or pressure vessel is deemed by the Director to constitute an immediate danger, the pressure on such boiler or pressure vessel shall be relieved and the boiler or pressure vessel secured at the owner's expense. Such unsafe boiler or pressure vessel shall be declared a nuisance and shall not be operated without approval of the Director.)~~

Section 29. Section 270 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, repealed:

~~((Section 270 – Accidents to be Reported~~

~~In case of serious accident, such as explosion or an event which renders a boiler or pressure vessel unsafe to return to operation, notice shall be given immediately to the Director and neither the boiler nor unfired pressure vessel nor any parts thereof shall be removed or disturbed before an inspection has been made by a City inspector unless for the purpose of saving life.))~~

Section 30. Section 280 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 280 – Operation~~

~~**280.1 General.** Boilers and pressure vessels shall be operated and maintained in conformity with requirements for adequate protection of the public established by the Director in accordance with nationally recognized standards.~~

~~**280.2 Licensed Operator Requirements.** Boilers and pressure vessels shall be operated and maintained by an appropriately licensed boiler operator in accordance with the City of Seattle Steam Engineer and Boiler Fireman License Law, Seattle Municipal Code Chapter 6.420.))~~

Section 31. Section 290 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 290))~~ **4.16 Combustion air.** Combustion air shall be provided in accordance with Chapter 7 of the Seattle Mechanical Code.

Section 32. Section 300 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 300))~~ **4.17 Venting.** ~~((Except as noted below, venting))~~ Venting of ~~((the products of))~~ combustion byproducts shall be in accordance with Chapter 8 of the Seattle Mechanical 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. ~~((, except on automatic boilers with pre-purge, automatic draft control and interlock.))~~ Operative dampers shall not be placed within any stack, flue, or vent of a gas-fired boiler. ~~((, except on an automatic))~~

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

~~((**Exception:** Baffles, draft restrictors or regulators and dampers which are supplied by the manufacturer as part of a boiler design and which are welded into position or otherwise permanently affixed when adjusted at installation.))~~

Section 33. Section 310 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 310--))~~ **4.18 Controls, ((Safety Devices, and Instrumentation)) safety devices, and instrumentation.** ~~((310.1 General.))~~ 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. ~~((310.2 Burners -- Listing Required. Fuel))~~ 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. ~~((310.3 Burners -- Fuel Selector Switches))~~ Burners ~~((installed on or after June 1, 1987))~~ that are 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.

~~((310.4))~~ **4.18.3 Gauges.** ~~((, General. Required))~~ The following gauges are required and shall be kept in good working ~~((order))~~ condition.

A. All steam boilers shall be provided with a pressure gauge and a water level glass. ~~((All water boilers shall be provided with a pressure gauge and a temperature indicator.))~~

B. All ~~((hot))~~ water ~~((supply/storage tanks))~~ boilers shall be provided with a pressure gauge and a temperature ~~((gauge))~~ indicator.

~~((310.5))~~ **4.18.4 Pressure and** ~~((Temperature Relief))~~ temperature relief.

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

B. Discharged liquid. ~~((310.5.1))~~ The discharge from liquid relief valves shall be piped to within 18 inches of the floor ~~((or))~~ to an open receptacle or floor drain. ~~((, and when the operating temperature is in excess of))~~ If the discharged liquid has the potential to exceed 140°F ~~((, shall be equipped with a means of tempering and cooling the discharge prior to entering the drainage system))~~ 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. ~~((See Uniform Plumbing Code, Section 810.))~~

C. Safety valve discharge. ~~((310.5.2))~~ 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. ~~((When))~~ If the discharge from safety valves would result in a hazardous discharge of steam inside the boiler room, or ~~((when))~~ if the discharge

of ~~((multiple))~~ safety valves on boilers exceeds the capacity of 1,000 pounds of steam per hour, ~~((such))~~ 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.

~~((310.5.3))~~ **4.18.5 Emergency shutdown switch.** ~~((Boilers in the boiler room shall be provided with an))~~ An emergency shutdown switch shall be located outside the boiler room, or ~~((other))~~ in another location approved by the ~~((Director))~~ code official. The ~~((purpose of such a))~~ switch ~~((is to))~~ shall allow ~~((the))~~ shutdown of all ~~((boiler(s)))~~ boilers in the boiler room without having to enter the boiler room. The emergency shutdown switch shall be suitable for the intended use.

~~((310.5.4 No valve of any description shall be placed between the safety relief valve and the boiler, nor on the discharge pipe between the safety relief valve and the atmosphere.))~~

~~((310.6))~~ **4.18.6 ((Low Water Cutoff)) Low-water cutoff or flow-sensing devices.**

A. For Water Boilers. ~~((310.6.1 Every water))~~ Water boilers ~~((, other than manually fired,))~~ shall be equipped with a manual reset type low-water cutoff device. ~~((~~ except that a boiler which requires forced circulation to prevent overheating shall have a flow-sensing device installed in lieu of the low-water cutoff. The required flow switch (if applicable) or the required manual reset type low-water cutoff shall be mounted in such a manner so as to prevent damage to the boiler and to permit testing of the low-water cutoff without draining the boiler system.
~~Manually operated and power actuated isolation valves between the low water cutoff and the boiler are prohibited. Delay functions incorporated in any low water cut-off or flow switch device will require the pre-approval of the Director. Delay functions not installed in accordance with the manufacturer's approvals shall not be used.~~

~~**Exception:** Vertical tube hot water supply boilers, such as those bearing the A.S.M.E. “HLW” stamp, that are directly connected to, and pressurized by the public water supply, need not be equipped with a low water cutoff or flow switch.~~

~~))~~

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. ((310.6.2)) Every steam boiler ((, other than manually fired,))

shall be equipped with two low-water cutoffs. The lower of the two cutoffs shall be equipped with a manual reset device.

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.

~~((310.6.3))~~ **4.18.7 Additional required devices.** ~~((In installations where two or more low-water cutoffs are installed, the cutoffs shall be separately piped where feasible.))~~

- A. Temperature. Temperature controls on all water and liquid boilers shall be equipped with two temperature controls, one of which shall have a manual reset device.
- B. Pressure controls. Pressure controls on all steam and vapor boilers shall be equipped with two pressure controls, one of which shall have a manual reset device.

- C. ~~((310.6.4 Water Feeding Devices))~~ Automatic water feeding devices. All steam, vapor, ~~((or))~~ 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 ~~((fired))~~ 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 Boilers and Pressure Vessels 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.

~~((310.7 Pressure and Temperature Controls.~~

~~**310.7.1 Water / Liquid.** All water or liquid boilers shall be equipped with two temperature controls one of which will be equipped with a manual reset device.~~

~~**310.7.2 Steam / Vapor.** All steam or vapor boilers shall be equipped with two pressure controls,~~

one of which will be equipped with a manual reset device.

310.8 Retroactive Requirements.

The following requirements shall be retroactive:

~~310.8.1 Every hot water boiler, other than manually fired, shall be equipped with two temperature controls wired in series. Every steam heating boiler, other than manually fired, shall be equipped with two pressure controls and a low water cutoff. Each temperature or pressure control shall have an independent sensing element. Shutoff valves of any type shall not be installed between a boiler and any pressure or temperature control.~~

~~310.8.2 Boilers and pressure vessels shall be provided with pressure relief valves to ensure positive relief of over pressure in accordance with nationally recognized standards.)~~

F. ~~((310.8.3 Every mechanically fired boiler))~~ Mechanically fired boilers which require ~~((s))~~ 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. ~~((310.9 Energy Management Systems))~~ Energy management systems. Energy management systems ~~((of any description))~~ shall not have the ability to override ~~((any control or))~~ safety devices required by this code. Such systems may only connect to a boiler control system at points provided by the manufacturer ~~((and intended))~~ 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 exceeding 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:

- A. Is part of a manufacturer-assembled boiler-burner unit approved by the code official;

- B. Serves a gas-fired boiler in Group R Occupancies of less than six units; or
- C. 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, CO₂ 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.

Section 34. Section 320 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 320))~~ **4.25 Boilers certified as automatic.** ~~((320.1 Boilers certified as automatic shall be equipped with controls and limit devices as set forth in Table 320-A, or ASME CSD-1, whichever is more restrictive.))~~ The Seattle Steam Engineer and Boiler Fireman 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:

4.25.1 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.

~~((320.2))~~ 4.25.2 Feed water systems ~~((Boilers certified as automatic shall))~~ not ~~((require))~~ requiring ~~((any))~~ manual operation. ~~((of the feed water system and shall also be equipped with the following gauges, as applicable:))~~

4.25.3 Stack temperature gauges.

4.25.4 ~~((1. Oil))~~ Oil temperature and oil suction pressure gauges ~~((;))~~ and/or ~~((2.))~~ high and low gas pressure gauges, as applicable. ~~((; and~~

~~3. stack temperature gauge.))~~

~~((320.3))~~ 4.25.5 ~~((A copy of the approved wiring diagram for a boiler certified as automatic shall be permanently and prominently displayed, under protective covering, in the boiler room, or within the official log book in an approved fashion. If the safety devices are wired or in some fashion digital in nature, a schematic with sufficient detail for a repair or service person to effectively restore the boiler to service will be acceptable. Such diagram shall include the coding of the actual wiring by color or by number to permit a ready check of the system.))~~ The original equipment manufacturer's operating and installation manual, together with electrical schematics or diagrams.

~~((320.4))~~ 4.25.6 Boilers 12.5 MM BTU/H and greater. All boilers certified as automatic of 12,500,000 Btu/h input and ~~((over))~~ greater shall also comply with the installation requirements of the current edition of ~~((N.F.P.A.))~~ NFPA 85, ~~((2004 edition))~~ Boiler and Combustion Systems Hazards Code.

~~(320.5)~~ 4.25.7 Solid fuel boilers. The ~~((Director))~~ code official may approve solid-fuel-fired boilers that ~~((can))~~ meet the safety requirements for automatic gas- or oil-fired boilers.

Table 4.25-A, Parts 1 and 2 are below:

Table ~~((320-A))~~ 4.25-A (Part 1 of 2)

Boiler Group	Fuel	Fuel Input ¹ Range in BTU/hr. (inclusive)	Type of Pilot ²	Safety Control Timing (in seconds, unless otherwise indicated)				Assured Fuel Supply Control ⁴	Assured Fuel Supply Control ⁵
				Trial for Pilot	Direct Electric Ignition	Flame Failure	Main Burner Flame Failure		
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 ~~((320-A))~~ 4.25-A (Part 2 of 2)

Boiler Group	Fuel	Fuel Input Range in BTU/hr. (inclusive) ¹	Low Fire Start Up Control ⁶	Pre-purging Control ⁷	Hot Water Temperature and Low Water Limit Controls ⁸	Steam Pressure and Low Water Limit Controls ⁹	Approved Fuel Shutoff ¹⁰	Control and Limit Device System Design ¹¹
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 ((320-A)) 4.25.

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 ((Director)) 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, ((and)) 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 ~~((approved))~~ tested by ~~((a testing))~~ an approved agency complying with nationally recognized standards and approved by the ~~((Director))~~ 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. ~~((and boiler))~~ Boiler groups F, G₂ 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, G₂ 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, G₂ 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, G₂ and H₂ 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, G₂ and H shall not permit pilot or main burner trial for ignition operation before a purging operation of sufficient duration to ~~((permit))~~ 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, ~~((will be))~~ 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 (~~((must))~~) shall be provided which puts these closures in a normally open position for four minutes before (~~((an attempt for))~~) attempting ignition. An installation with a trapped combustion chamber shall (~~((in every case))~~) always be provided with a mechanical means of creating air movement for purging. Purge air flow in boiler groups C, D, G₂ 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. (~~((See Section 310))~~) Shall comply with Section 4.18 of this code.

9. (~~((See Section 310))~~) 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 (~~((and/))~~) or pilot gas burner supply line. The safety shutoff valve(s) shall be interlocked to the required programming control devices. (~~((required.))~~) 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 (~~((, of which))~~) 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/in²) 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 ~~((Director))~~ 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 ~~((sø))~~ arranged so that when they are de-energized the burner shall be inoperative.

Section 35. Section 330 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is amended and renumbered as follows:

~~((Section 330 Monitored boilers~~

~~Note: The Seattle Steam Engineer and Boiler Fireman License Law, Seattle Municipal Code Chapter 6.420, provides for reduced attendance requirements for boilers that are certified as monitored.))~~

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 Fireman License Law, Seattle Municipal Code Chapter 6.420. The boiler owner or lessee is responsible for compliance with this Section 4.26.

~~((330.1))~~ **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 ~~((:A))~~ means a 'Class A' Central Station Agency as defined and approved by the Seattle Fire Department.

MONITORING SYSTEM ~~((:An approved))~~ means a protective alarm signaling system ~~((approved by a nationally recognized testing agency))~~ used for surveillance of controls and limit devices required on certain automatic boilers.

~~((PROPRIETARY))~~ **ON-SITE MONITORED SYSTEM** ~~((A))~~ means a monitoring system with constant supervision by competent and experienced personnel in a central supervising station ~~((at the property protected))~~ located on the site where the boiler is installed. The system ~~((is to include))~~ includes equipment and ~~((other))~~ facilities required to ~~((permit))~~ allow the boiler and monitoring system operators to test and operate the system and, upon receipt of a signal, to take ~~((such))~~ responsive action. ~~((as is required.))~~

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

~~((330.2))~~ **4.26.2 Approval of ((Monitoring Systems)) monitoring systems.**

- A. ~~((An installation permit is required to certify a boiler as monitored. The annual fee for such certification shall be as established in the Permit Fee Subtitle, Seattle Municipal Code Section 22.900E as applicable. Monitored Boiler status is available only to boilers certified by the Director as Automatic Boilers.))~~ Status. Monitored boiler status is available only to boilers certified by the code official as automatic boilers.
- B. Acceptance ~~((Tests))~~ tests. Upon completion of ~~((a))~~ system installation, a satisfactory test of the entire installation shall be made in the presence of the ~~((department))~~ City inspector. It shall be the responsibility of the applicant to demonstrate ~~((in the presence of the department inspector by testing of the apparatus, or such other means as may be appropriate,))~~ the operation and reliability of the ~~((subject))~~ monitoring system during the test of the equipment. The ~~((department))~~ City inspector may require additional tests ~~((as he/she deems))~~ if deemed necessary for the ~~((safe))~~ operation and proper maintenance of the monitoring system and the boiler plant ~~((s))~~ served by such system.

- C. Inspection. An inspection by a ~~((department))~~ City inspector ~~((is required))~~ may be conducted annually for certification renewal.
- D. ~~((Equipment))~~ Listing required. All ~~((Monitoring System))~~ monitoring system devices shall be ~~((approved))~~ listed and labeled by a nationally recognized testing agency.

~~((330.3)) 4.26.3 ((Alarms/Signals, Personnel and Reporting))~~ Signals, personnel, and reporting.

- A. Required ~~((Alarms))~~ signals. ~~((A monitoring system shall sense low water level and flame failure on all boilers, steam pressure at the upper limit setting on steam boilers or water temperature at the upper limit setting on hot water boilers.))~~ 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, a ~~((manually reset relay device shall shut off the fuel supply to the boiler and shall relay an alarm))~~ signal shall be sent to the monitoring system. The monitoring system shall ~~((sense))~~ send a signal if existing limit controls and flame failure devices have caused the boiler to shut down.

- B. Monitoring ~~((System Personnel))~~ system personnel. The monitoring station shall have sufficient personnel ~~((constantly))~~ on duty to assure immediate attention to all ~~((alarm))~~ signals received. ~~((The minimum age of all monitoring station operators shall be eighteen years. Operation and supervision shall be the primary functions of the monitoring station operators and no other interest or activity shall take precedence over the protective service.))~~

- C. Report ~~((Availability))~~ availability. Reports of all ~~((alarm))~~ signals received by the monitoring station shall be made available ~~((upon request to the Director))~~ when requested by the code official and as required in this Section 4.26.3.
- D. Disposition of ~~((Signals))~~ signals. ~~((1-))~~ Upon receipt of ~~((trouble signals))~~ a signal ~~((or other signals))~~ pertaining solely to matters of equipment maintenance of the signaling systems, the monitoring station operating company shall: ~~((immediately investigate and, if possible, assure that the trouble is remedied at once.))~~
1. ~~((In all cases where service of the signaling system is interrupted and is corrected within 12 hours,))~~ Notify the property owner ~~((shall be notified immediately. This notification shall be confirmed by written notice with a copy sent to the Director.))~~ when the function of signaling system is interrupted and is not corrected within 12 hours.
 2. ~~((Upon receipt of an alarm signal, the monitoring station shall notify))~~ Notify the on-site ~~((boiler operating engineer, if any, or the boiler supervisor by telephone or by the quickest method available))~~ designated point of contact as soon as possible.
 3. Notify the code official ~~((Upon))~~ upon receipt of ~~((an))~~ a ~~((alarm))~~ signal not caused by routine inspection and maintenance. ~~((, the designated boiler supervisor shall notify the director.))~~
- ~~((4.))~~ E. ~~((Definite instructions))~~ Procedures to be available. Procedures for ~~((the handling of alarms))~~ responding to signals shall be ~~((posted for the guidance of the operators of the monitoring system))~~ readily available to the on-site designated point of contact and shall include procedures for notifying the boiler supervisor and the code official.
- ~~((330.4))~~ F. Maintenance and ~~((Repair))~~ repair of monitoring equipment.
- ~~((A.))~~ 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.

- ~~((B-))~~ 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 hot 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 (RCW Chapter 70.79).
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 (RCW Chapter 70.79) 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 hot 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 hot water heating boilers not using corrosion inhibitors are inspected internally at least once every two years.
 2. Low pressure steam boilers shall be inspected internally at least once every two years.
 3. 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. 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.

1. Preparation shall include the following unless directed otherwise by the boiler inspector:
 - A. Water shall be drained and the boiler thoroughly cleaned.
 - B. Manhole and handhole plates and wash-out plugs and water column connections shall be removed.
 - C. Furnace and combustion chambers shall be thoroughly cooled and cleaned.
 - D. All grates of internally fired boilers shall be removed.
 - E. Brickwork or refractory shall be removed, if needed, to determine the condition of the boiler headers, furnace, supports or other parts.

- F. Leakage of steam or hot water into the boiler shall be prevented while it is open for inspection.
 - G. Low water cutout shall be disassembled as necessary to allow for inspection.
 - H. Compliance with any lock-out or tag-out and confined space entry procedures shall be followed if required by the owner, operator, OSHA, WDOH rules, and other regulations applying to the safety of personnel.
2. 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.

- 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.

2. Reports. Authorized insurance inspectors shall make their reports to the code official on forms or as prescribed by the Department.
3. Suspension of coverage. Authorized insurance inspectors shall immediately notify the code official of any suspension of insurance coverage.
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.

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 Fireman License

Law, Seattle Municipal Code Chapter 6.420.

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 vessel systems.

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. An installation permit may be required before proceeding with the repair or alteration if required by Section 4 of this code.

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. Significant repair. If the repair or alteration is outside the scope of the NBIC, Part 3, then

the boiler or pressure vessel shall be repaired to the satisfaction of the in-service inspector. The in-service inspector shall make a written report to the code official describing the repair or alteration, how it was completed, and whether it is satisfactory. If the code official determines the repair is satisfactory, a Certificate of Inspection is issued.

6.1.4. Replacement. Replacement of any boiler or pressure vessel shall comply with the requirements of this code for the type of boiler or pressure vessel being installed. The code official may agree to a variance that is equivalently safe when existing circumstances on site justify a variance.

6.1.5. Notification. The in-service inspector shall be notified of the nature of the repair or alteration and kept apprised of the progress until the inspector completes the required documentation. Once completed, the code official shall be notified that the boiler or pressure vessel is repaired, altered, or otherwise made whole again, and is ready to return to service.

6.1.6. Approval. A copy of the required inspection report shall be sent to the code official before the boiler or pressure vessel system is returned to service.

Section 7 - Retroactive requirements

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

7.1.1 Power hot water boiler, other than manually fired, shall be equipped with at least two temperature controls wired in series.

7.1.2 Every steam heating boiler, other than manually fired, shall be equipped with at least two pressure controls and a low-water cutoff.

7.1.3 Each temperature or pressure control shall have an independent sensing element.

7.1.4 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.

Section 36. Section 340 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 340—Expansion Tanks~~

~~All hot water heating systems shall be provided with an air expansion tank securely fastened to the structure. Supports shall be adequate to carry twice the weight of the tank filled with water without placing any strain on connecting piping.~~

~~Expansion tanks exempted for size in Section 100 of this code shall conform to the requirements of ASME Section IV, HG-709.))~~

Section 37. Section 350 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 350—Blow-off Tanks~~

~~The discharge from boilers shall not exceed a temperature of 140°F before entering the drainage system. Some means of tempering and cooling the discharge prior to entering the drainage system shall be provided. Proper care shall be made to prevent discharge of liquids or chemicals that could damage drainage systems. (Reference Uniform Plumbing Code, Section 810).~~

- ~~A. Blow-off tanks, when used, shall be designed in accordance with the National Board of Boilers and Pressure Vessels Blow-off Equipment Standard NB-27.~~
- ~~B. For power boilers, blow-off tanks shall be used to receive effluent from the bottom blow-off and low water cutoff drains unless an alternate means of safe discharge can be provided. Any alternate method shall be approved by the Director prior to installation.~~
- ~~C. Blow-off tanks, being open vessels, are not required to have valid inspection certificates. They are, however, included in the inspection of the boiler or boilers that they serve.))~~

Section 38. Section 360 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 360—Clearance Requirements~~

~~When boilers are installed or replaced, clearance shall be provided to allow access for inspection, maintenance and repair. Passageways around all sides of boilers 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:** Subject to the approval of the Director, 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 5000 pounds per hour or having a heating surface in excess of 1000 square feet or input 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; 5000 pounds steam per hour capacity or 1000 square foot heating surface; and power boilers which do not exceed one of the following limits: 5,000,000 Btu/h input; 5000 pound steam per hour capacity or 1000 square foot heating surface; and all boilers with manholes on top of the boiler, except those described in paragraphs 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 above limits shall have a minimum clearance of 2 feet from the ceiling.~~
- D. ~~Adequate clearance for access and to permit entry shall be provided for pressure vessels. Pressure vessels equipped with manhole openings shall have a minimum of five feet clearance from any obstruction. All other inspection openings shall be at least 18 inches from any obstruction.))~~

Section 39. Section 370 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 119478, is repealed:

~~((Section 370 – Underground Installations~~

~~Where necessary to install a pressure vessel underground, it shall be enclosed in a concrete or masonry pit. If the pit is to be covered, it shall be equipped with a removable cover so that inspection of the entire shell and heads of the vessel can be made. Clearance requirements shall be in accordance with Section 360 of this code.))~~

Section 40. Section 380 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 380 – Boiler Rooms / Enclosures~~

~~Boiler rooms shall comply with Seattle Mechanical Code and Seattle Fire Code requirements for machinery rooms.~~

~~380.1 Mounting.~~

- A. ~~All equipment shall be set or mounted on a level base capable of supporting and distributing the weight contained thereon.~~
- B. ~~All boilers, tanks and equipment shall be securely anchored to the structure. This requirement does not prohibit the use of flexible mounts for vibration isolation or mounting devices that allow for thermal expansion.~~
- C. ~~Equipment requiring vibration isolation shall be installed as designed by a registered engineer to the satisfaction of the Director.~~

380.2 Floors.

Boilers shall be mounted on floors of non-combustible construction unless listed for mounting on combustible flooring.

380.3 Drainage.

For heating or hot water supply boiler applications, the boiler room shall be equipped with a floor drain or other means suitable for disposing of the accumulation of liquid wastes incident to cleaning, recharging and routine maintenance.

380.4 Installation in Garages and Warehouses.

- A. Boilers and pressure vessels installed in garages, warehouses or other areas where they may be subjected to mechanical damage shall be suitably guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.
- B. Boilers located in a garage and which have an ignition source shall be installed with sources of ignition at least 18 inches above the floor level. See also Seattle Mechanical Code Section 304.3.

Exception: Installations within a garage enclosed in a separate approved compartment having access only from outside of the garage provided the required combustion air is taken from and discharged to the exterior of the garage.

380.5 Platforms Around Boilers and Pressure Vessels.

Platforms shall be provided allowing safe access to each boiler or pressure vessel when the boiler controls, valves, manholes, or casing openings are over ten feet above the floor, including boilers and pressure vessels mounted in false ceilings.))

Section 41. Section 390 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

((Section 390 – Fuel Piping

- A. **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 upstream of the gas shutoff valve of the main burner and shall be valved separately. A union or other approved means of disconnect shall be provided immediately downstream of these shutoff valves.
- B. **Gas Pressure Regulators.** An approved gas pressure regulator shall be installed on gas-fired boilers where 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 the pilot or pilots. A separate regulator shall not be required for the pilot or pilots on manufacturer-assembled boiler-burner units which have been approved by the Director and on gas-fired boilers in Group R Occupancies of less than six units and in Group U Occupancies.

~~C. Fuel piping installation shall conform to the provisions of the Seattle Fuel Gas Code.))~~

Section 42. Section 400 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 400 – Steam and Hydronic Piping~~

~~400.1 General. Steam and hydronic piping systems which are part of a boiler or heating system shall conform to the requirements of the International Mechanical Code Chapter 12, and the codes listed in Section 170 of this code. When piping falls outside the scope of the applicable sections of the above codes, a standard approved by the Director may be used.~~

~~400.2 Materials and Construction.~~

~~A. All piping, tubing, valves, joints, fittings, devices and materials shall be free of defects and comply with nationally recognized standards approved by the Director.~~

~~B. Galvanized piping and fittings are prohibited.))~~

Section 43. Section 410 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 121865, is repealed:

~~((Section 410 – Pressure Reducing Valves~~

~~A. Where pressure reducing valves are used, one or more relief or safety valves and pressure gauges shall be provided on the low pressure side of the reducing valve. The relief or safety valves shall be located adjoining to or as close as possible to the reducing valve. Proper protection shall be provided to prevent injury or damage caused by the escaping steam from the discharge of relief or safety valves if vented to the atmosphere. The combined discharge capacity of the relief valves shall be such that the pressure rating of the lower pressure piping or equipment shall not be exceeded in case the reducing valve sticks open.~~

~~B. The use of a hand controlled bypass around a reducing valves is permissible. The capacity of the bypass shall not exceed the capacity of the reducing valve. Unless all the equipment downstream of the reducing station meets the requirements of the high pressure system, the low pressure side shall be protected by one or more safety valves having adequate capacity.))~~

Section 44. Section 420 of the Seattle Boiler and Pressure Vessel Code, last amended by Ordinance 119478, is repealed:

~~((Section 420 – Elevator Machine Rooms / Spaces and Hoistways~~

~~Pipes conveying gases, vapors or liquids which are not used in connection with the operation of the elevator shall not be installed in any hoistway, machine room or machinery space.))~~

Section 45. Beginning on the effective date of this ordinance and ending on June 1, 2017, permit applicants who submit a

valid and fully complete building permit application during that period may elect to have the application reviewed under the provisions of Ordinance 121865 rather than this ordinance.

Section 46. The provisions of this ordinance are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this ordinance, or the invalidity of the application thereof to any person, owner, or circumstance shall not affect the validity of the remainder of this ordinance, or the validity of its application to other persons, owners, or circumstances.

Section 47. This ordinance shall take effect and be in force 30 days after its approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Passed by the City Council the _____ day of _____, 2017, and signed by me in open session in authentication of its passage this ____ day of _____, 2017.

President _____ of the City Council

Approved by me this _____ day of _____, 2017.

Edward B. Murray, Mayor

Filed by me this _____ day of _____, 2017.

Monica Martinez Simmons, City Clerk

(Seal)