AGENDA ITEM III.

STATE OF OREGON **MEMORANDUM**

BUILDING CODES DIVISION **APRIL 7, 2005**

TO: BOARD OF BOILER RULES

FROM: TERRY SWISHER
INTERIM CHIEF BOILER INSPECTOR

SUBJECT: BOILER AND PRESSURE VESSEL CODE CHANGE

ACTION REQUESTED: Approve staff recommendation.

HISTORY: The Oregon Boiler and Pressure Vessel Specialty Code Adoption Committee met March 22, 2005. The committee discussed the latest editions of codes available and adoption procedures for addenda. The attached recommendation was prepared for consideration by the board for adoption.

DISCUSSION/ALTERNATIVES:

The following alternatives are available:
1. Disapprove the draft recommendation and return to committee for further study.
2. Approve the draft for public hearing and rule adoption.
3. Amend the draft and approve for public hearing and rule adoption.

RECOMMENDATION: Approve draft rules for public hearing adoption, and make a finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

2005 Oregon Boiler and Pressure Vessel Specialty Code Adoption

Draft 2

April 7, 2005

918-225-0240
Definitions

As used in OAR chapter 918, division 225, unless the context requires otherwise:

(1) "Agricultural Purposes" means:

(a) Sowing, tending, and harvesting of products of the soil grown under natural conditions;

(b) Raising of poultry or fowl;

(c) Pasturage or raising of livestock or other animals; or

(d) Original processing of the farm product, but not the processing of the product of a different operator, or reprocessing work as freezing, canning, or packing if performed substantially for commercial purposes.

(2) "Available" to determine inspection fees at cost, means the vessels must be due for inspection in the year the notification is applicable, and must all be ready for inspection at the time designated by the inspector.

(3) "Board" is defined in ORS 480.515(1).

(4) "Boiler Room" means any enclosed room or designated space within a building, intended by design or by usage to contain a boiler that is connected and available for use. A boiler located in an area not meeting the definition of "boiler room" under OAR 918-225-0465 shall apply to any space within 20 feet of any burner.

(5) "Building Service Piping" means piping systems operating at or less than 150 psig steam; and water at or less than 160 psig and 250o F. as described in **ANSI/ASME Standard B31.9.**~~[, 1988 Edition.]~~

(6) "Chief Inspector" means the inspector appointed by the Director pursuant to ORS 480.565(1).

(7) "Farm" means an area of land:

(a) Located in a rural district;

(b) Of sufficient size to generally be considered as a farm in its locale; and

(c) Devoted primarily to tillage and raising crops under natural conditions, or to raising animals, fowl, or poultry.

(8) "Emergency" as used in ORS 480.630(7) means an unplanned circumstance requiring immediate repair, installation, replacement or shutdown because of risk to health, life or property.

(9) "Hobby" or "Demonstration" means recreational or other noncommercial use.

(10) "Immediate Safety Hazard" means hazardous conditions exist requiring immediate correction to a boiler, pressure vessel or pressure piping system to preserve the safety of people or property.

(11) "Installer," as used in the boiler or pressure vessel laws and rules, means the person making the water, steam, air, refrigerant or other product piping connection to the boiler or pressure vessel. A person who transports or merely positions the boiler or pressure vessel is not an "installer." An electrician making electrical connections is not an "installer."

(12) "National Board" means the National Board of Boiler and Pressure Vessel Inspectors.

(13) "Operating" means any vessel connected and ready for service.

(14) "Person" means any individual, partnership, corporation, association, governmental subdivision or public or private organization of any character.

(15) "Place of Public Assembly" means a building used or held for use, in whole or in part, for worship, health treatment, rest, recuperation or retirement living; child care nurseries or institutions; public meetings; education; instruction; entertainment; eating; recreation; or awaiting transportation.

(16) "Pressure Piping" means piping systems and components under the scope of **ASME B31.1**, **B31.3**, **B31.5** and **B31.9**.

(17) "Pressure Relief Valve" means a valve activated by inlet static pressure which opens in proportion to the increase in pressure over the opening pressure range. Only ASME approved valves are allowed under the boiler rules.

(18) "Pressure Vessel" is defined in ORS 480.515(9).

(19) "Psig" means pounds per square inch gauge pressure.

(20) "Quantity," to determine inspection fees at cost, means six or more vessels.

(21) "Related Appurtenance" is defined in ORS 480.515(11).

(22) "Safety Valve" means a valve activated by inlet static pressure and characterized by rapid opening or pop action. Only ASME approved valves are allowed under the boiler rules.

(23) "Same Location," to determine inspection fees at cost, means that all vessels are within 2,000 feet of one another.

(24) "Service of Process" means deposit in the U.S. mail a copy of a notice addressed to the respondent at the respondent's last known address.

(25) "Single Private Residence" means a one-family dwelling structure.

(26) "Process Piping Inspector" means the owner's inspector, for the inspection of **ASME B31.3 Process Piping**, Category "M" fluid service only.

(27) "Structure" means a building or shed with a roof and enclosed on the sides 75 percent or more.

(28) "Traction Boiler" means a boiler constructed before January 1, 1961, designed to operate or pull equipment, or to convert steam power into a flywheel energy driving apparatus such as a thresher, road roller, or grinding equipment.

(29) "Vessel That is Considered Subject to Corrosion or Erosion" means the vessel contains or is intended to contain contents having a corrosive or erosive effect on any portion of the vessel. The use of glass linings leaves a vessel subject to corrosion unless all portions of the vessel are impervious to the corrosive or erosive effects of the contents.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545
Stats. Implemented: ORS 480.545
Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 3-1982, f. & ef. 2-3-82; DC 1-1984, f. & ef. 1-5-84; BCA 4-1989, f. & cert. ef. 4-17-89; Renumbered from 814-025-0003; BCA 4-1989, f. & cert. ef. 4-17-89; BCA 5-1991, f. & cert. ef. 3-15-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0005; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 4-2003, f. & cert. ef. 3-14-03

918-225-0430
Designation of Effective Codes

The **Boiler and Pressure Vessel Specialty Code** containing the minimum safety standards for boilers, pressure vessels, pressure piping, nuclear components, parts, items, and repair and alteration procedures in Oregon is:

(1) ORS 480.510 to 480.665 and OAR chapter 918, division 225;

(2) The **Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers (ASME)**, [~~dated 1998 and addenda;~~] **2004 Edition as published of Section I; Section II, Parts A, B,C and D; Section IV; Section V; Section VI; Section VII; Section VIII, Division 1, 2 and 3; Section IX; and Section X.**

(3) The [~~**1998]**~~ **2004 Edition** of the **ANSI/ASME B31.1 Power Piping Code.** [~~and addenda;~~]

(4) The [~~**1999]**~~ **2004 Edition** of the **ANSI/ASME B31.3 Process Piping Code.** [~~and addenda;~~]

(5) The [~~**1992]**~~ **2001 Edition** of the **ANSI/ASME B31.5 Refrigeration Piping Code.** [~~and addenda;~~]

(6)The **1996 Edition** of the **ANSI/ASME B31.9 Building Service Piping Code.** [~~and addenda;~~]

(7) The [~~**1998]**~~ **2004 Edition** of the **National Board Inspection Code ANSI/NB 23**;

[~~(8) The **1998 Edition** of **ANSI/ASME CSD-1, Controls and Safety Devices**; and addenda;~~]

[~~(9)~~] **(8)** The [~~**1997]**~~ **2004 Edition** of **NFPA [~~8501, Single Burner Boiler Operation;~~] 85, Boiler and Combustion Systems Hazards Code.**

[~~(10)~~] **(9)** The [~~**1999 Edition** of **NFPA 8502, Standard for the Prevention of Furnace Explosions/Implosions in Multiple Burner Boilers;~~] **2004 Edition of ASME CSD-1, Controls for Safety;** and

[~~(11)~~] **(10)** The alternate methods provisions under OAR 918-225-0440.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545
Stats. Implemented: ORS 480.545
Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 19, f. 6-21-73, ef. 7-1-73; DC 27(Temp), f. & ef. 12-31-73; DC 33, f. 5-6-74, ef. 5-25-74; DC 38(Temp), f. & ef. 11-1-74; DC 50, f. 7-2-75, ef. 7-25-75; DC 89, f. & ef. 6-2-77; DC 93, f. & ef. 7-19-76; DC 1-1978, f. 1-5-78, ef. 1-15-78; DC 4-1980, f. & ef. 5-30-80; DC 6-1982, f. & ef. 2-4-82; DC 23-1982, f. & ef. 11-9-82; DC 18-1983, f. & ef. 8-11-1983; DC 21-1983, f. & ef. 9-29-83; DC 1-1984, f. & ef. 1-5-84; DC 18-1984, f. & ef. 5-9-84; DC 36-1984, f. & ef. 12-4-84; DC 16-1985, f. & ef. 7-1-85; DC 6-1986, f. & ef. 5-5-86; DC 2-1987, f. & ef. 2-18-87; BCA 5-1987, f. & ef. 8-24-87; BCA 15-1988, f. & cert. ef. 11-16-88; BCA 25-1989, f. & cert. ef. 7-27-89; Renumbered from 814-025-0006; BCA 5-1990, f. & cert. ef. 2-6-90; BCA 26-1990, f. & cert. ef. 10-30-90; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0015; BCD 17-1996, f. & cert. ef. 9-17-96; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 14-2002, f. & cert. ef. 7-1-02

918-225-0560
Responsibility of Inspectors

(1) All deputy and special inspectors shall perform boiler, pressure vessel and pressure piping inspections in accordance with the **Boiler and Pressure Vessel Specialty Code** adopted in OAR 918-225-0430 and the following requirements of the division:

(a) For new boilers, the inspector shall verify that the controls and safety devices required by **ASME CSD-1.[~~-1998~~]** or other construction codes are installed and function as designed in accordance with manufacturer's instructions;

(b) External boiler inspections shall be performed with the boiler in normal operation. The inspector shall examine all controls, safety devices, water columns and gauge glasses for evidence of tampering and shall verify that all testing has been performed to ensure proper functioning;

(c) Internal boiler inspections shall be performed in a thorough and complete manner. Manways and other inspection openings necessary to perform a particular inspection shall be removed for access to the boiler internals. Water columns, feed water controllers and feed piping shall be inspected internally. The inspector shall visually examine pressure boundary retaining devices, boiler refractory, hangers, clips, boiler tubes and headers and drum internals for damage, corrosion, overheating, welded repairs, feedwater treatment or any detrimental conditions;

(d) The inspector shall explain to the owner or user that any boiler, pressure vessel or pressure piping deficiency requires correction under the **Oregon Boiler Specialty Code**. The inspector shall require conditions not hazardous to health or safety to be corrected within 30 days. The inspector shall require conditions hazardous to health or safety to be corrected prior to operating the equipment. The owner or user of the equipment may apply to the chief inspector for extension of the 30-day correction requirement; and

(e) All inspectors witnessing installation, repair or alteration of boilers, pressure vessels or pressure piping shall verify that the contractor and workers performing the work are appropriately licensed and hold valid permits as required by ORS 480.630.

(2) Failure to comply with subsections (1)(a) through (e) of this rule, or failure of an owner or user to perform a required deficiency correction may cause additional inspections to be performed per ORS 480.570 as directed by the chief inspector.

(3) The responsibilities of process piping inspectors are located in OAR 918-225-0562.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545
Stats. Implemented: ORS 480.545
Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 37-1984, f. & ef. 12-4-84; Renumbered from 814-025-0020; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0045; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 4-2003, f. & cert. ef. 3-14-03

918-225-0660
Certification of Special Inspectors

(1) An application for special inspector certification shall be filed by an employer described in ORS 480.565(3) using forms provided by the division and submitting the appropriate application fee.

(2) The person to be certified shall meet the experience requirements in OAR 918-225-0650 and shall have passed the National Board of Boiler and Pressure Vessel Inspectors Examination.

(3) An examination covering the Oregon Boiler and Pressure Vessel Law, ORS 480.510 to 480.990 and OAR chapter 918, division 225, the **National Board Inspection Code** and **ASME CSD-1.[~~-1998~~]** shall be given by the chief inspector to all special inspector applicants.

(4) Special inspector certifications shall be renewed annually, by paying a renewal fee of $25 prior to January 1 of each year.

(5) When a special inspector leaves the employment of the employer covered by ORS 480.565, the employer shall notify the division and return the special inspector certification.

(6) Process piping inspectors shall be certified pursuant to OAR 918-225-0665.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.565
Stats. Implemented: ORS 480.565
Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 27(Temp), f. & ef. 12-31-73; DC 33, f. 5-6-74, ef. 5-25-74; Renumbered from 814-025-0065; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0135; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 4-2003, f. & cert. ef. 3-14-03