



October 21, 2008

Pressure vessel inspection frequency

Opportunity for public input:

Those who would like to provide public testimony may attend a public hearing on October 21, 2008 at 10:30 a.m. The hearing will be located at the Building Codes Division, Conference Room A. Written comments may also be submitted to the contact below. The last day to submit written comments is 5:00 p.m. October 24, 2008.

Live broadcast via the internet:

To view the public hearing live, click on "[View live meetings](#)"

Purpose of the rule:

The proposed rule amendments are a continuation of the division's efforts to focus inspections on those pressure vessels that pose greater safety risks to the public. The proposed changes made to this rule specify the frequency of pressure vessel inspections to improve efficiency by tailoring inspection cycles to match the safety risks posed by particular classes of pressure vessels. The proposed changes also allows boiler and pressure vessel owners to choose to have some boilers and pressure vessels inspected more frequently (off-cycle) in order to get all boilers and pressure vessels at one facility inspected at the same time.

If adopted, these rules would become effective January 1, 2009.

Citation:

Adopts: OAR 918-225-0570

History:

In 2005, the division's boiler program was independently audited to determine possible program improvements. One audit recommendation was to reconsider the frequency of pressure vessel inspections, in order to ensure that the division is using its inspection resources most effectively. An advisory committee was formed to determine which pressure vessels pose greater life safety hazards, those that pose lesser risks, and what the inspection frequency should be. The committee held several meetings and made a recommendation to the Board of Boiler Rules separating the pressure vessels into classes and specifying the required inspection cycles for pressure vessels in the state of Oregon.

The Board of Boiler Rules, at its September 9, 2008 meeting, considered and approved the proposed rules for public hearing and subsequent adoption.

Contact:

If you have questions or need further information, please contact Hearing Officer Celina Patterson at 503-373-0855, or Celina.R.Patterson@state.or.us.



Secretary of State
NOTICE OF PROPOSED RULEMAKING HEARING*

A Statement of Need and Fiscal Impact accompanies this form.

Department of Consumer and Business Services, Building Codes Division	918
Agency and Division	Administrative Rules Chapter Number

Shauna M. Parker	PO Box 14470, Salem, OR 97309	(503) 373-7438
Rules Coordinator	Address	Telephone

RULE CAPTION

Changes the inspection frequency of certain pressure vessels.

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

October 21, 2008	10:30 a.m.	1535 Edgewater Street NW, Salem, OR 97304	Celina Patterson
Hearing Date	Time	Location	Hearings Officer

Auxiliary aids for persons with disabilities are available upon advance request.

RULEMAKING ACTION

Secure approval of new rule numbers (Adopted or Renumbered rules) with the Administrative Rules Unit prior to filing.

ADOPT:

AMEND: 918-225-0570

REPEAL:

RENUMBER:

AMEND & RENUMBER:

Stat. Auth.: ORS 480.545, 480.550 & 480.560

Other Auth.:

Stats. Implemented: ORS 480.545, 480.550 & 480.560

RULE SUMMARY

The proposed rule specifies the frequency of pressure vessel inspections. Inspection frequency was adjusted to improve efficiency by tailoring inspection cycles to match the safety risks posed by particular classes of pressure vessels. The proposed rule also allows boiler and pressure vessel owners to choose to have some boilers and pressure vessels inspected more frequently (off-cycle) in order to get all boilers and pressure vessels at one facility inspected at the same time.

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing the negative economic impact of the rule on business.

Friday, October 24, 2008 by 5:00 p.m.

Last Day for Public Comment (Last day to submit written comments to the Rules Coordinator)

Mark Long		
Signature	Printed name	Date

*Hearing Notices published in the Oregon Bulletin must be submitted by 5:00 pm on the 15th day of the preceding month unless this deadline falls on a weekend or legal holiday, upon which the deadline is 5:00 pm the preceding workday. ARC 920-2005

STATEMENT OF NEED AND FISCAL IMPACT

A Notice of Proposed Rulemaking Hearing or a Notice of Proposed Rulemaking accompanies this form.

Department of Consumer and Business Services, Building Codes Division

918

Agency and Division

Administrative Rules Chapter Number

Clarifies the inspection frequency cycles of certain pressure vessels.

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of: Amending OAR 918-225-0570

Statutory Authority: ORS 480.545, 480.550 & 480.560

Other Authority:

Stats. Implemented: ORS 480.545, 480.550 & 480.560

Need for the Rule(s): The proposed rule is needed to most effectively use inspection resources for boilers and pressure vessels. In 2005, the division's boiler program was independently audited. One audit recommendation was to reconsider inspection frequency in order to maximize efficiency while preserving public safety. In order to accomplish this recommendation, an advisory committee determined which pressure vessels posed greater safety risks and which vessels posed lesser safety risks. This rule implements the committee's and the auditor's recommendations by specifying the required inspection cycles for pressure vessels in the state of Oregon.

Documents Relied Upon, and where they are available: Pressure Vessel Inspection Frequency Rulemaking Advisory Committee minutes from November 13, 2007, January 24, 2008, and July 10, 2008; Board of Boiler Rules minutes from September 11, 2007, June 3, 2008, and September 9, 2008; and draft rules are available from the division's rules coordinator located at 1535 Edgewater Street NW, Salem, OR 97304 and are available on the division's Web site at: www.bcd.oregon.gov.

Fiscal and Economic Impact:

This rule should have little or no fiscal impact because it does not change the cost of pressure vessel operating permits. The permit fees include the cost of periodic inspections. The permit fees remain the same whether or not an inspection is performed during a permit cycle (for example, a vessel that has a one-year operating permit may be inspected every two years but the cost of the permit is the same in the year that is inspected and in the year that it is not inspected).

Statement of Cost of Compliance:

1. Impact on state agencies, units of local government and the public (ORS 183.335(2)(b)(E)):

Based on information available to the division, the division has determined that the proposed rule will have no foreseeable significant fiscal impact on state agencies, units of local governments, or the public. The proposed rule will, however, help the division inspection program function more efficiently.

2. Cost of compliance effect on small business (ORS 183.336):

a. Estimate the number of small businesses and types of business and industries with small businesses subject to the rule:

The division issues over thirty thousand pressure vessel permits, some of which are located in small businesses. The proposed rule does not impose any added costs upon small businesses, as the requirements for the frequency of inspections do not affect the cost of pressure vessel permits (and inspection costs are included in the permit costs).

b. Projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services:

The proposed rule does not impose any additional reporting, record keeping, or administrative requirements on small businesses.

c. Equipment, supplies, labor and increased administration required for compliance:

The proposed rule does not impose any additional equipment, supplies, labor, or increased administration on small businesses in order to comply.

How were small businesses involved in the development of this rule? Small businesses were represented on the rulemaking advisory committee as well as on the Board of Boiler Rules, both of which reviewed these rules.

Administrative Rule Advisory Committee consulted?: Yes

If not, why?:

Signature	Mark Long	Date
	Printed name	

Administrative Rules Unit, Archives Division, Secretary of State, 800 Summer Street NE, Salem, Oregon 97310. ARC 925-2007

Pressure Vessel Inspection Frequency Rules
Draft- 9-10-08

918-225-0570

Boiler and Pressure Vessel Inspection Schedules

Unless the division grants special permission, all inspectors must comply with the following ~~minimum~~ inspection schedule:

NOTE: Table 1-B, Boiler and Pressure Vessel Inspection Cycles, is available on the division's Web site at <insert link here>.

- (1) Power boilers must be inspected, **at minimum:**
 - (a) Internally -- every year, when physical construction of the boiler allows; and
 - (b) Externally -- every year, while under pressure.
- (2) Cast iron boilers must be inspected externally -- every two years, while under pressure.
- (3) Low pressure steam boilers must be inspected, **at minimum:**
 - (a) Internally -- every two years, when physical construction of the boiler allows; and
 - (b) Externally -- every two years, while under pressure.
- (4) Hot water heating and hot water supply boilers must be inspected:
 - (a) Internally -- every six years, when physical construction of the boiler allows; and
 - (b) Externally -- every two years, while under pressure.
- (5) Pressure vessels containing anhydrous ammonia intended for use as fertilizer must be inspected, **at minimum,** externally every three years.
- (6) Portable pressure vessels, mounted on a motorized vehicle and containing only air, not exceeding 5 cubic feet in volume and operated at gauge pressures of not more than 200 pounds per square inch must be inspected, at minimum:**
 - (a) Internally- -every four years, subject to section (14) of this rule; and**
 - (b) Externally--every four years.**
- ~~(6)~~**(7) Fixed pressure vessels, containing only air, not located at a place of public assembly, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 200 pounds per square inch must be inspected, at minimum:**
 - (a) Internally – **every six years,** subject to section ~~(11)~~**(14)** of this rule; and
 - (b) Externally -- every six years.

~~(7)~~**(8)** Co2 vessels and hydro-pneumatic pressure vessels, used for beverage service, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 300 pounds per square inch must be inspected, **at minimum**:

- (a) Internally – **every six years**, subject to section ~~(11)~~ **(14)** of this rule; and
- (b) Externally every six years.

~~(8)~~**(9)** Pressure vessels, not classified in sections (5), (6), ~~and (7)~~, **and (8)** of this rule, and subject to internal corrosion or erosion must be inspected, **at minimum**:

- (a) Internally -- every two years, subject to section ~~(11)~~**(14)** of this rule; and
- (b) Externally -- every two years.

~~(9)~~**(10)** Unfired pressure vessels, not classified in sections (5), (6), ~~and (7)~~, **(8), (11), and (12)** of this rule, and not subject to internal corrosion must be inspected, **at minimum**, externally -- every ~~two~~ **four** years.

(11) Unfired pressure vessels not subject to internal corrosion but containing a substance which, if it were to leak, might cause serious irreversible harm to a person must be inspected, at minimum:

- (a) Internally -- every two years, subject to section (14) of this rule; and**
- (b) Externally -- every two years.**

(c) A substance “might cause serious irreversible harm” if the substance’s Material Safety Data Sheet describes serious health or physical risks caused by short-term exposure to the substance.

(12) Unfired pressure vessels not subject to internal corrosion that are located at a place of public assembly and are not classified in section (8) of this rule must be inspected, at minimum:

- (a) Internally -- every two years, subject to section (14) of this rule; and**
- (b) Externally -- every two years.**

~~(10)~~**(13)** Pressure piping systems containing refrigerants, steam or pressurized condensate: Inspection during fabrication, installation, repair or alteration for verification of compliance with material, welding, brazing and structural support requirements. The inspector may require other tests to verify quality of weldments. This rule does not apply to welded repair of pressure piping under OAR 918-225-0720.

~~(11)~~**(14)**The inspector may waive an internal inspection, under sections ~~(5), (6), and (7),~~ **(8), (9), (11), or (12)** of this rule if the inspector believes from alternate inspection methods an internal inspection is not necessary to verify the safe condition of the vessel.

~~(12)~~**(15)**An inspector may require additional internal or external inspections, or tests, other than those required in this rule, if the inspector has reason to believe that the boiler or pressure vessel does not meet minimum safety standards.

~~(13)~~**(16)** Failure to comply with sections (1) through ~~(12)~~**(15)** of this rule may cause inspections to be performed by a deputy inspector per ORS 480.570~~(5)~~**(6)** as directed by the chief inspector.

Stat. Auth.: ORS 480.545, 480.550, 480.560

Stats. Implemented: ORS 480.545, 480.550, 480.560

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 12-1980, f. & ef. 9-12-80; BCA 1-1987, f. & ef. 7-1-87; Renumbered from 814-025-0075; BCA 22-1992(Temp), f. 12-15-92, cert. ef. 1-1-93; BCA 4-1993, f. & cert. ef. 4-5-93; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0175; BCD 18-1996, f. & cert. ef. 9-17-96; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 15-2006, f. 12-29-06, cert. ef. 1-1-07; BCD 7-2007, f. 7-13-07, cert. ef. 9-1-07

TABLE 1-A

BOILER & PRESSURE VESSEL OPERATING PERMIT PERIODS

1-year operating permit	Power boilers
2-year operating permit	Cast iron boilers Low pressure steam boilers Hot water heating & supply boilers Air tanks (greater than 20cf, 200 psi) CO2 tanks (greater than 20cf, 300 psi) CO2 tanks (20cf, 300 psi or less, located in places of public assembly) Unfired pressure vessels (not classified in OAR 918-225-0570(5), (6) and (7))
3-year operating permit	Anhydrous ammonia pressure vessels for farm use
5-year operating permit	Fixed air tanks (20 cf, 200 psi or less) CO2 tanks (20cf, 300 psi or less, not located in places of public assembly)

Table 1-B

BOILER & PRESSURE VESSEL INSPECTION CYCLES

<u>1-year inspection cycle</u>	<u>Power boilers, internally and externally</u>
<u>2-year inspection cycle</u>	<u>Cast iron boilers, externally</u> <u>Low pressure steam boilers, internally and externally</u> <u>Hot water heating and hot water supply boilers, externally</u> <u>Pressure vessels subject to internal corrosion or erosion, internally (may be waived) and externally</u> <u>Pressure vessels not subject to internal corrosion or erosion but containing a hazardous substance, internally (may be waived) and externally</u> <u>Pressure vessels not subject to internal corrosion or erosion but located in a place of public assembly, internally (may be waived) and externally</u>
<u>3-year inspection cycle</u>	<u>Pressure vessels containing anhydrous ammonia for use as fertilizer</u>
<u>4-year inspection cycle</u>	<u>Portable pressure vessels, mounted on a motorized vehicle and containing only air (5 cf or less, 200 psi or less); internally (may be waived) and externally</u> <u>Pressure vessels not subject to internal corrosion or erosion, internally (may be waived) and externally</u>
<u>6-year inspection cycle</u>	<u>Hot water heating and hot water supply boilers, internally (when physical construction of the boiler allows)</u> <u>Fixed pressure vessels, containing only air (not in public assembly; 20 cf and 200 psi or less), internally (may be waived) and externally</u> <u>CO2 tanks and hydro-pneumatic pressure vessels used for beverage service (20cf, 300 psi or less), internally (may be waived) and externally</u>