

Board of Boiler Rules Meeting Minutes
May 7, 2025
Department of Labor & Industries, Hybrid Meeting

Board Members:

Tim Barker, Chair
Keith Black, Boiler Operators
Michael Kipper, Manufacturers
John Pittman, Professional Engineers
Stephanie Gross, Owner/Users
Michael Carlson, Secretary

Other Attendees:

Meagan Edwards, State of Washington
Don Sage, State of Washington
Jason Stedman, State of Washington
Andrew Worline, State of Washington
Plazi Ricklin, TerraPower
David Bankston, TerraPower
Nate Price, HF Sinclair
Christopher Fisher, HF Sinclair

- * Attended Study Session only
- ** Attended Board Meeting only

The Board of Boiler Rules meeting began at 10:03 a.m. Discussion summaries are incorporated in the meeting minutes.

Agenda Item 1 – Approval of Agenda

Tim Barker called to review the agenda which was previously reviewed in the study session the day prior. No objections to the agenda.

Tim called a motion to approve agenda.

Mike Kipper motioned to approve. Keith Black seconded the motion to approve.

Tim Barker called for a vote. All board members voted “aye.” Agenda approved.

Agenda Item 2 – Review and approve minutes from February 5, 2025 meeting

Board has reviewed minutes prior to the meeting. There are no concerns or issues with the minutes.

Tim calls to approve.

Keith Black motions to approve minutes. Stephanie Gross seconds the motion to approve.

Tim Barker asked for any additional comments. None stated.

Tim Barker calls for a vote to approve the February 5, 2025 minutes.

All board members voted “aye.” Minutes are approved.

Agenda Item 3 – Review of HF Sinclair request for extension of Inspection frequency for Steam Drum 09238-99W (a.k.a. 16C301)

This request was discussed in detail during the prior study session.

Nate Price from HF Sinclair provided a summary for the Request for extension of inspection frequency for their steam drum – State number 09238-99W also known as 16C301.

HF Sinclair is seeing an extension to October 2026 which is justified by the four points below provided by Nate Price.

1. Current UT inspection data supports decades of remaining life on the vessel.
2. A solid boiler feed water chemistry treatment program with low conductivity levels exists, supporting low corrosion rates.
3. The boiler is operated in a stable manner that includes independent protective functions that are tested periodically to ensure function.
4. The boiler is protected by two PRV's that are subject to periodic inspection and maintenance.

Tim Barker noted that the state's database (JOL) indicates the last internal inspection was on 04/21/2025, but it should have been 03/2020. That inspection should have been an internal non-cert inspection.

Clarifying further, Tim Barker indicated the certificates are issued on these types of objects on the external inspection on an annual basis. If we were to go with internal 5 year frequency, then that would impact the certificates.

Additionally Tim Barker noted that the PR's, when tested, are tested in “as received” condition prior to any maintenance. Those tests indicate that the PRV is within range of the requirements. This is also provides a service history that the frequency of testing is acceptable.

No additional questions from the Board.

John Pittman motions to approve the request. Keith Black seconds the motion.

Tim Barker Calls for a vote.

Stephanie Gross abstains from the vote due to being an employee of HF Sinclair.

All other board members vote “aye.” Motion passes to approve extension request to October 2026.

Agenda Item 4 – Review of State Special Request for two TerraPower – Inconel 625 vessels

Plazi Ricklin from TerraPower provided a summary of the request for State Special for two Inconel 625 pressure vessels.

Plazi stated that two vessels are mechanical twins of a nuclear test reactor that is planning to build in Idaho in 2.5 – 3 years and are designed to ASME Section 3.5 code, which is Nuclear High Temperature design code.

The vessels are not able to be stamped due to the material selection being Inconel 625 and the code only allows for 617. Plazi also indicated that there has been extensive research on evaluating 625 versus 617. Ultimately, 625 was chosen as the better material due to corrosion requirements.

The design of the vessels was completed by Hayward Tyler and Prime Engineering and are being built in specialized shops capable of nuclear pressure vessel construction.

Plazi indicated that extensive analysis was completed and submitted, which included creep fatigue analysis at high temperatures.

Further vessel details include clarification that the fuel tank (annular) is made completely by Energy Steel. The reactor vessel (referred to as RXE) is made by two different companies. Hayward Tyler is responsible for the pump bowl and the overall vessel is Energy Steel.

Tim Barker clarified the definition of a heat cycle to be raising from ambient temperature to operating temperature and back down to ambient temperature as one cycle.

Plazi further clarified the timeframe for one cycle to be on the order of a week to go from ambient temp to 650 degrees. It would then take longer to cool down under natural convection cooling. The intention is bring to temperature once, conduct testing, and maintain temperature for extended periods.

The longest duration test is a pump run slated for 500-1000 hours. The plan also includes multiple attempts to reach 1,000 hours within a two-year test run.

The board is considering a request for the operating permit lasting between two and four years. Plazi confirmed that all data is collected in a PLC control system with a historian, allowing for verification of compliance.

Plazi then indicates that TerraPower plans on having an inspection completed before the reactor is encased in insulation and another inspection completed prior to operation. They did indicate that an inspection completed with a borescope would take some coordination prior.

Plazi then discussed relief protection for the vessel. He indicated that the salt has a boiling point in the 2000 degree range which leaves no vapor pressure.

Pressure inside the vessel can only come from an external Argon source, which has pressure relief before connection to prevent over-pressurization.

There are six ASME relief valves in the system with certifications from the supplier. The vessel is rated for 500 kpa (about 72 psi) and the reliefs are set at about 110% of that.

No additional comments or questions from the Board.

Tim Barker calls for a motion to approve the state special to operate these two vessels for a period not to exceed four years.

Inspections will occur at two-year intervals, including one before wrapping, one upon arrival, and one

at the halfway mark.

Stephanie Gross motions to approve. Mike Kipper second the motion to approve.

Tim Barker calls for a vote.

All board members vote “aye.” Motion passes to approve the State Special Request for TerraPower.

Department notes

Mike Carlson presented quarterly boiler program inspection information to the board.

Inspections completed from February 1, 2025- April 30, 2025

The following information is regarding current workload and overdue inspections in the Boiler program. Data collected 5/5/2025. Currently, there are:

149 State Commissioned Inspectors

Inspections in the last quarter- February 1, 2025- April 30, 2025

344 Internal boiler inspections. (171)

2,096 External boiler inspections. (2,004)

13,764 Pressure vessel inspections. (11,740)

Total inspections =. **16,204** (13,915)

The Statewide overdue rate average is **8.3%** (7.9%) with **9,657** (9,102) (60 days or more overdue) without a valid certificate.

5,233 new objects have been added in 2024.

Current total of objects is **116,765** (116,692)

There were **792** violations opened, **129** were closed last quarter. (581,133)

Currently there are **393**-boiler, and **1,366**-pressure vessel violations open which totals **1,759**. (345, 1,077, 1,422)

Two red tag violation opened last quarter.

- (1) Leaking and ruptured tubes. – WT Boiler
- (2) Welded Without R-Stamp- Air receiver

Mike Carlson discussed CR-103 Rule Changes. These changes include revised language for Pool Heaters and a 6.41% fee increase to the program.

Tim Barker is retiring around July 1st. The board discussed the need for a new Chair. The board has a choice to defer the vote for a new chair or Stephanie Gross will become the default chair in August due to having the most tenure on the board.

Mike Carlson also provided an update on the proposed Boiler Operator bill. He indicated that the bill

has stalled out in the House Appropriations Committee due to cost and budget concerns. Mike indicated that the rulemaking part of the proposed bill will be through the department (L&I) moving forward. The board will still have the responsibility of approving fee increases. Mike indicated that there may be a need for a Boiler meeting to discuss the bill before it is proposed again.

The next meeting will be August 19, 2025 for the study session and August 20, 2025 for the Board meeting.

Tim Barker Motions to adjourn the meeting. Stephanie Gross motions to adjourn the meeting. Keith Black seconded the motion.

Tim called for a vote.

All board members voted "Aye."

May 7, 2025 session of the Board of Boiler Rules meeting is adjourned.