



Meeting Summary

Fuel Tanks Seismic Stability 2023
Advisory Committee Meeting 2

Dec. 16, 2022

Meeting Summary

Purpose of Meeting

On Dec.16, 2022, DEQ convened the second meeting of the Fuel Tanks Seismic Stability Rulemaking via Zoom webinar. The purpose of the meeting was to:

- Discuss the scope of the program under the SB 1567
- Discuss the tasks and deliverables of DEQ's technical support team consisting of PSU and Haley and Aldrich
- Discuss the draft outline of the eventual rule
- Provide platform for public input

Meeting Attendees

The meeting attendees included members of the FTSS Rulemaking Advisory Committee:

- Paul Edison-Lahm - Environmental justice interests, NAACP
- Randy Groves - Eugene Springfield Fire Chief (retired) & City Councilor
- Nancy Hiser - Linnton Neighborhood Association
- Andrew Holbrook - Kinder Morgan NW Operations Manager
- Lindsey Hutchison - Attorney for Willamette Riverkeeper
- Holli Johnson - Western States Petroleum Assn.
- Amit Kumar - Structural engineer at City of Portland
- Doug Lenz - Columbia Pacific Bio-Refinery plant manager
- Warren Seely - Seely Mint Farm
- Sterling Stokes – Portland Harbor Community Coalition
- Chris Voss - Multnomah County Director of Emergency Management
- Jacque Wurster - Director of neighborhood emergency team in Eugene, Community Emergency Response Team certified
- Peter Dusicka – Portland State University, Professor of Civil Engineering

DEQ and technical support team members:

- Mike Korten Hof - DEQ Fuel Tank Compliance Program Manager
- Svetlana Lazarev - DEQ Project Manager
- Lauren Wirtis - DEQ Public Affairs Specialist
- Abby Boudouris - DEQ Senior Legislative Analyst
- Ellie Brown – DEQ Senior Hazardous Waste Policy Analyst
- Allison Pynch - Haley and Aldrich, Inc. Project Engineer
- Yumei Wang- PSU Senior Advisor on Infrastructure Resilience and Risk
- Luke Hanst - PSU Institute for Sustainable Solutions

There were approximately 36 members of the public in attendance.

Welcome, Introductions and Program overview

DEQ welcomed everyone to the meeting and provided an overview of Zoom webinar, meeting agenda, October meeting follow-up, the scope of the program under SB 1567 requirements, policy and technical support tasks and deliverables, draft rule outline and public input options. The Rules Advisory Committee discussed the sequence of the tasks and provided input on the preliminary outline of the draft rule. The presentation and the discussion were structured in four main parts.

1. In and Out of Scope Elements

- In-scope – minimizing risk
 - Applying current engineering standards and best practices to existing facilities to minimize facility failure due to earthquakes and minimize risk to those living and working nearby, with the understanding that 100% elimination of risk is not possible.
 - Minimizing risk from expected earthquakes at the site including the magnitude 9.0 Cascadia Subduction Zone event.
 - Potential of structures to maintain operations, or safely shut down.
- In scope - design
 - Assessment elements: ground shaking, liquefaction and lateral ground movement, landslides, etc.
 - Mitigation: equipment retrofit or replacement, ground stabilization, facility spill containment preparation and operation, backup systems to maintain facility systems, etc.
 - Design standards.
- Out of scope
 - Fuel availability or shortage and security after event.
 - Regional impacts, impacts to other infrastructure (e.g., dam failures).
 - Expected time to resume fuel distribution.
 - Regulation of fossil fuel consumption.
 - Fossil fuel phase-out.
 - Fuel production and usage policies.
 - Area-wide spill response operations.
 - Out of scope questions will be forwarded to relevant parties or tracked for future recommendations.

Committee discussion:

- Role of insurance.
- Area-wide spill response operations versus the in-scope capabilities for response operations.
- Existing spill response operations.

2. Policy and Technical Support Tasks

- PSU: existing policies research, rulemaking support, historically underserved communities and founding opportunities research
- Haley and Aldrich, Inc.: Seismic stability engineering requirements in other jurisdictions, standards for seismic design, review of recent new facilities' construction
- Haley and Aldrich will do comprehensive research and review requirements for disaster resilience and standards for building resilience and petrochemical storage tanks.

- Both PSU and Haley and Aldrich are reviewing regulations at other jurisdictions. PSU's focus is policy, Haley and Aldrich's focus is engineering. The teams are coordinating their reviews to avoid redundancy.

Committee discussion focused on:

- Downstream impacts considerations.
- Risk mitigation goals: maintaining operations vs. controlling and minimizing discharge.
- Performance requirements goals for facilities such as ASCE 4.
- Performance requirements for all elements of a facility.
- Seismic analysis of levee systems that protect facilities including high liquefaction risk.
- Coordination with the local jurisdiction to evaluate the protective levees and infrastructure for seismic resilience.
- Flood risk at facilities.
- Performance standards for all tank sizes and amount of fuel stored.
- Mitigation of risk at existing structures compared to new constructions.
- Decision-making on the final performance criteria being selected.
- Ground stabilization based on the performance standards and engineering decisions at facilities.
- The mitigation plans provided by facilities evaluation by qualified engineers to ensure that they meet the requirements set forth in the law.
- Enforcement and implementation of mitigation plans.

3. Draft Rule Outline

Reviewed 10 sections of the preliminary rule outline showing the general structure and direction of the rule:

- Purpose and Scope
- Applicability
- Definitions
- Acronyms
- Geotechnical Engineering Facility Assessment Scope and Requirements
- Required Assessment elements
- Mitigation plan requirements
- Required mitigation plan elements
- Reporting requirements, test methods and procedures
- Public Notice

Committee discussion:

- Focused on seismic stability and considered potential connection to risk reduction from other potential disasters such as flooding, ecoterrorism, human error, etc.
- Title of Geotechnical Engineering Facility Assessment scope section should be clear to include requirements as Facility Seismic Vulnerability Assessment Scope and Requirements.
- Pipelines outside of the facility property line are regulated at the federal level and are out of scope.
- Compliance schedule, justifications of noncompliance.
- Mitigation plan schedules.

- Completeness of assessments and mitigation plans and potential iterations; penalties for non-compliance, mitigation implementation and updates.
- Soil sampling at facilities.
- Using industry standards for assessments vs. building codes.
- Definition of qualified professional. Rely on the professional practice expectations in the field of engineering and keep the qualified professional definition inclusive.
- Different components of facility have different performance criteria.
- Timeline of mitigation plans implementation depending on the size of the project, leeway for contracting, etc. Could be straightforward or a multi-year project. Consider limited availability of resources around engineering professional services. Phasing of implementation.
- ShakeAlert warning system.
- Public availability of information: mitigation plans will be published on DEQ website minus the confidential information.
- Penalties for non-compliance.
- Hazardous materials exposure.
- Testing methods and inspections frequency, reporting, compliance and enforcement.
- Enforcement rules are defined in DEQ rules Chapter 340, Division 12.
- Potential recommendations for actions that facilities could take now in anticipation of the rules.

4. General Public Input

Six members of the public provided input relating to:

- Communities' right to know.
- Confidential versus proprietary information.
- Potential public hearing requests.
- Offsite impact studies.
- Performance and evidence based designed standards.
- Risk perception and severity literature.
- Meaning of the risk in this context.
- A two-tiered design requirements system for continued operation versus discharge.
- Equity.
- Inspections.
- Downstream impacts.
- Peer review of any site-specific modeling results.
- ShakeAlert infrastructure and integration into internal communication and control mechanisms.
- Relationship between the intent to mitigate risks and the capability to respond to an earthquake induced spill.

Next Steps

Task updates from the technical support team and discussion of the draft rule is planned for the next RAC meeting in February. An additional RAC meeting in April will be scheduled to review the revised draft rules, equity analysis, environmental justice analysis and fiscal impacts analysis.

--The purpose of the meeting was achieved and the meeting adjourned at 12 pm--

Meeting materials are available:

<https://www.oregon.gov/deq/rulemaking/Pages/seismicstability2023.aspx>

The next RAC meeting is scheduled for 9 a.m. – 12 p.m. on Friday, March 3, 2023

Translation or other formats

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