



Seismic Stability Program Status Report

July 2024

This report provides an update on the Seismic Stability Program, including updates on compliance with the requirement for facilities to submit Seismic Vulnerability Assessments to DEQ by the statutory deadline of June 1, 2024, as well as details about program implementation support.

1. Background

The Fuel Tank Seismic Stability Program, created by the Oregon Legislature in 2022 (SB 1567), resides in DEQ's Land Quality Division. The regulatory program is designed to evaluate and improve the earthquake resilience of large-capacity oil and fuel storage facilities. It gives DEQ authority to regulate seismic vulnerability assessments and risk minimization implementation at the largest fuel storage and distribution facilities in Columbia, Multnomah, and Lane counties. The program will enhance DEQ's ability to safeguard public health, life safety and the environment from fires and fuel product releases linked to earthquakes. It establishes the process and criteria for facilities to develop and submit Seismic Vulnerability Assessments and Risk Mitigation Implementation Plans to DEQ for review and approval. The assessments, implementation plans and timeline, DEQ's review and approval process, fees, implementation criteria, and reporting requirements are provided in Oregon Administrative Rules Chapter 340, Division 300, adopted by the Oregon Environmental Quality Commission in consultation with the Department of Geology and Mineral Industries and the Oregon Department of Energy on Sept. 15, 2023.

As of June 1, 2024, the statutory deadline, 16 facilities submitted to DEQ their Seismic Vulnerability Assessments which consist of the geotechnical, structural and safety assessments prescribed by the OAR 340-300-0003.

Geotechnical Assessment consists of site surface and sub-surface conditions evaluation, complete with soil tests and field explorations.

Structural Assessment consists of a description of the expected seismic performance of all onsite structures where damage could result in a potential release of fuel including any above or underground storage tanks, pipes, foundations of structures, buildings, structures, additional components, spill containment structures, transloading facilities, wharves, piers, moorings and retaining structures, loading racks, control equipment and any other structures within the property line or operated together.

Safety Assessment consists of three elements:

- Evaluation of the fire control and suppression systems and procedures and the analysis of the potential impacts of seismic hazards on these systems.
- Evaluation of spill containment systems, equipment, and procedures in the event of an earthquake and their vulnerabilities to the identified seismic hazards at the site.
- Evaluation of onsite emergency equipment, operational safety measures, and personnel policies/availability and their vulnerabilities to the identified seismic hazards at the site.

OAR 340-300-0004 describes the Risk Mitigation Implementation Plan requirements. Plans must be submitted to DEQ 180 days after the Seismic Vulnerability Assessment is approved. The plan must do the following:

- Propose risk mitigation measures to address vulnerabilities identified in the Seismic Vulnerability Assessment to protect public health, life safety and the environment.

- Outline and justify milestones for one, three and five years to get as much done as efficiently as possible.
- Identify the risks remaining after all mitigation measures are implemented.

All risk-minimizing actions must be implemented within 10 years of the plan’s approval.

2. Information received by DEQ by June 1, 2024

The 16 facilities that submitted the required Seismic Vulnerability Assessment reports are listed in Table 1. DEQ will determine the completeness of the submitted assessments. The initial completeness determination efforts show that some of the assessments are ready to be reviewed, some are initial assessments with a completion timeline while others do not specify a timeline for completion.

Table 1. Seismic Vulnerability Assessment reports received by DEQ.

1	Cascade Kelly Holdings LLC - Pacific Bio-Refinery	Columbia
2	Chevron Fuels - Willbridge Terminal	Multnomah
3	Kinder Morgan Liquids Terminal - Willbridge	Multnomah
4	Kinder Morgan Liquids Terminal - Linnton	Multnomah
5	McCall Oil & Chemical Corporation	Multnomah
6	NW Natural Corporation	Multnomah
7	Owens Corning Roofing and Asphalt LLC	Multnomah
8	Pacific Terminal Services	Multnomah
9	PDX Fuel LLC	Multnomah
10	Phillips 66 Company	Multnomah
11	Portland General Electric - Beaver Plant/Port Westward	Columbia
12	Seaport Midstream Partners, LLC	Multnomah
13	Kinder Morgan Eugene - SFPP LP	Lane
14	Shore Terminals LLC - NuStar Energy	Multnomah
15	Triton West LLC - Shell	Multnomah
16	Zenith Energy Terminals	Multnomah

Once the completeness status is determined and any supplemental information has been received from the facilities, all Seismic Vulnerability Assessments will be available to the public in the Oregon Records Management System. This step is expected to be completed by the end of September 2024 when technical engineering reviews will begin. Technical review is anticipated to include interactive conversations between DEQ, facility operators and engineering teams. The timing of SVA approvals will vary by facility and DEQ is planning to complete technical reviews in the first half of 2025.

One facility, PDX Fuels, LLC submitted their assessment and mitigation information for DEQ review before the June deadline. PDX Fuels, LLC owns and operates the fuel tanks at the Portland Airport. Plans to replace the

existing tanks with new tanks meeting modern seismic resilience requirements are being reviewed for compliance with DEQ requirements and will be made available for public comment later in 2024.

One additional facility, Vigor Industrial, LLC located in Multnomah County, signed an enforceable Mutual Agreement and Final Order with DEQ. In March 2024, Vigor filed a petition challenging the applicability of the Fuel Tank Seismic Stability law to their shipbuilding operations. Vigor argued that although the company has storage tanks in excess of the two-million-gallon threshold stated in SB 1567 and the implementing regulations (OAR Chapter 340, Division 300), its shipyard is not a facility “primarily engaged in the transport or bulk storage of oils or liquid fuel products,” and thus not subject to the program’s requirements. Subsequently, DEQ and Vigor negotiated an enforceable MAO. The MAO requires Vigor to eliminate four million gallons of oil storage capacity by 2028 rather than going through the Seismic Stability Program. This agreement avoids the delay and uncertainty of litigation and achieves major risk reductions over a four-year timeframe. Vigor must submit progress reports to DEQ every other month from July 2024 to July 2028 and DEQ will conduct inspections to confirm compliance.

3. Program implementation support

To facilitate the Seismic Vulnerability Assessment and Risk Mitigation Implementation Plan preparation, DEQ developed a document called [Roadmap to Compliance with OAR 340-300](#). The document provides direction about content, organization and timeline and allows the facilities to streamline their assessments. There are also [10 forms](#) designed as step-by-step checklists for the assessment of tanks, piers, wharfs, burns and dikes, buildings, fire suppression and control systems.

It is important to recognize that engineering reports, including seismic vulnerability analyses and mitigation assessments, are often not written for general audiences and often include highly specialized language. As the Seismic Vulnerability Assessments submitted by the facilities and the peer review reports become publicly available, readers of such reports should exercise caution to avoid overinterpretation and misinterpretation of the report content.

Contact

If you have any questions, please email SeismicStability@deq.oregon.gov

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