

WAC 173-180-330 Storage tank requirements. (1) Storage tanks constructed after May 1994 and before the effective date of this rule must meet or exceed the 1993 version of the National Fire Protection Association (NFPA No. 30) requirements and one of the following design and manufacturing standards:

(a) UL No. 142, Steel Aboveground Tanks for Flammable and Combustible Liquids (1993);

(b) API Standard 650, Welded Steel Tanks for Oil Storage (1988);

(c) API Standard 620, Design and Construction of Large Welded, Low-Pressure Tanks (1990); or

(d) Another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section.

(2) Storage tanks constructed before the effective date of this rule must include protective measures that are designed, installed, and maintained to reduce risk from seismic events and that include one or more of the following:

(a) Flexible mechanical device(s) between storage tank and piping or sufficient piping flexibility to protect the tank and pipe connection and prevent the release of product;

(b) Foundation driven pilings;

(c) Anchored storage tanks; or

(d) Another seismic protection measure proposed by the facility and approved by ecology, as long as such protection measure equals or exceeds those required in this section. This may include demonstrating the storage tank meets API Standard 650 (2020) seismic design requirements, including Annex E and section E.7.3 Piping Flexibility.

(3) Storage tanks constructed after the effective date of this rule must meet the following requirements:

(a) Meet or exceed the 2021 version of the NFPA No. 30 requirements and one of the following design and manufacturing standards:

(i) UL No. 142, Steel Aboveground Tanks for Flammable and Combustible Liquids (2019);

(ii) API Standard 650, Welded Steel Tanks for Oil Storage (2020);

(iii) API Standard 620, Design and Construction of Large Welded, Low-Pressure Tanks (2013 with Addendum 1 (2014), 2 (2018), and 3 (2021)); or

(iv) Another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section.

(b) Must be designed to meet the following seismic design requirements:

(i) API Standard 650 (2020) seismic design requirements, including Annex E and section E.7.3 Piping Flexibility;

(ii) American Society of Civil Engineers (ASCE) 7-22 Risk Category III or IV, including Site Class A, B, C, D, E, or F based on on-site soil properties, and meet seismic design requirements under chapter 16 of the 2021 International Building Code (IBC) and WAC 51-50-1613 and 51-50-1615; and

(iii) Resist tsunamis based on the facility's risk area using a tsunami hazard tool or a tsunami design zone map, and meet tsunami requirements under chapter 16 of the 2021 IBC and WAC 51-50-1613 and 51-50-1615.

(4) Storage tanks must be inspected under the seismic design requirements of API Standard 653 (2014 with Addendum 1 (2018) and 2 (2020)) and applicable requirements of 2021 IBC. The results of these inspections must be included in the facility's spill risk analysis as required under WAC 173-180-630.

(5) The owner or operator must ensure that the means of preventing storage tank overfill comply with the 2021 version of the NFPA, Flammable and Combustible Code, No. 30, Chapter 21, section 21.7.1, Prevention of Overfilling of Storage Tanks.

(6) Storage tanks must be maintained, repaired, and inspected in accordance with the requirements of API Standard 653 (2014 with Addendum 1 (2018) and 2 (2020)), unless the operator proposes an equivalent inspection strategy which is approved by ecology.

[Statutory Authority: RCW 88.46.160, 88.46.165, 90.56.005, 90.56.050, 90.56.200, 90.56.220, 90.56.230, and chapter 90.56 RCW. WSR 23-12-077 (Order 21-03), § 173-180-330, filed 6/6/23, effective 7/7/23. Statutory Authority: RCW 88.46.160, 88.46.165, and chapter 90.56 RCW. WSR 06-20-034 (Order 06-02), § 173-180-330, filed 9/25/06, effective 10/26/06.]