

**WAC 173-180-340 Transfer pipeline requirements.** (1) Pipelines replaced, relocated, or constructed after May 1994 and before the effective date of this rule, which are located in areas not controlled by the facility, must be installed in accordance with 49 C.F.R. Parts 195.246 through 195.254 (1991), where feasible. Facility control is established by fencing, barriers, or another method approved by ecology which protects the pipe right of way and limits access to personnel authorized by the facility.

(2) Pipelines constructed after May 1994 and before the effective date of this rule must be designed and constructed in accordance with the American Society of Mechanical Engineers (ASME) Standard for pressure piping ASME B31.3 or B31.4 (1993), or another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section.

(3) All pipelines 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 include one or more of the following, and are also installed under the provisions of chapter 57 of the 2021 International Fire Code (IFC), where applicable:

(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) Flexible mechanical device(s) or adequate pipeline flexibility between pipes;

(c) Pipeline supports that protect against seismic motion;

(d) Automatic emergency isolation shutoff valves that are triggered to close during seismic events; or

(e) 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.

(4) Pipelines replaced, relocated, or constructed after the effective date of this rule, which are located in areas not controlled by the facility, must be installed in accordance with 49 C.F.R. Parts 195.202 (1981), 195.204 (2015), 195.205 (2015), 195.206 (1981), 195.207 (2015), 195.208 (1998), 195.210 (1998), 195.212 (1998), 195.214 (2017), 195.216 (1981), 195.222 (2017), 195.224 (1981), 195.226 (1981), 195.228 (2015), 195.230 (1983), 195.234 (2015), 195.246 (2004), 195.248 (2017), 195.250 (1998), 195.252 (2003), 194.254 (1981), and 195.256 (1981), where feasible.

(5) Pipelines constructed after the effective date of this rule must also:

(a) Be designed and constructed in accordance with the ASME Standard for pressure piping ASME B31.3 - 2022 (2023) or B31.4 - 2022 (2022), or another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section;

(b) Be designed to API Standard 650 (2020), Annex E, section E.7.3 Piping Flexibility when connected to storage tanks;

(c) Be installed under the provisions of chapter 57 of the 2021 IFC, where applicable, and include one or more of the following:

(i) Flexible mechanical device(s) or adequate pipeline flexibility between pipes;

(ii) Pipeline supports that protect against seismic motion;

(iii) Automatic emergency isolation shutoff valves that are triggered to close during seismic events; or

(iv) 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.

(d) Resist tsunamis based on the facility's risk area using a tsunami hazard tool or a tsunami design zoning map.

(6) All pipelines must be protected from third party damage in a reasonable manner and be able to withstand external forces exerted upon them. This must be done by:

(a) Registering all underground pipelines located in public right of way areas in the local one call system if available;

(b) Maintaining accurate maps for all underground pipelines located outside the facility. The maps must identify pipeline size and location. The approximate depths of pipelines must be identified for pipelines which do not comply with 49 C.F.R. Parts 195.202 through 195.234, 195.248, and 195.256;

(c) Marking all piping located in areas not controlled by the facility in accordance with 49 C.F.R. Parts 195.202 through 195.234, 195.256, and 195.410;

(d) Providing easement inspections of areas identified in (b) of this subsection on a weekly basis to determine if there is any uncommon activity occurring which may affect the integrity of the pipeline; and

(e) Ensuring that pipelines at each railroad, highway, or road crossing are designed and installed to adequately withstand the dynamic forces exerted by anticipated traffic loads.

(7) Pipelines must be inspected in accordance with API Standard 570, Piping Inspection Code (2016 with Addendum 1 (2017) and 2 (2018), and Errata (2018)) or another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section. As an alternative to complying with API Standard 570, the facility must comply with the following requirement: Buried pipelines constructed after May 1994 must be coated. Coatings must be designed and inspected to meet the following conditions consistent with the definition of best achievable protection:

(a) Coatings must effectively electrically isolate the external surfaces of the pipeline system from the environment.

(b) Coatings must have sufficient adhesion to effectively resist underfilm migration of moisture.

(c) Coatings must be sufficiently ductile to resist cracking.

(d) The coating must have sufficient impact and abrasion resistance or otherwise be protected to resist damage due to soil stress and normal handling (including concrete coating application, installation of river weights, and anode bracelet installation, where applicable).

(e) The coating must be compatible with cathodic protection.

(f) The coating must be compatible with the operating temperature of the pipeline.

(g) Coatings must be inspected immediately before, during, or after pipeline installation to detect coating faults. Faults in the coating must be repaired and reinspected.

(8) All buried coated pipelines must have properly operated cathodic protection which is maintained during the operational life of the pipeline system. Cathodic protection must be maintained on pipeline systems which are out-of-service but not abandoned unless the operator can show that the pipeline integrity has been properly monitored and secured as approved by ecology prior to operation of the abandoned pipeline. Pipeline owners or operators may perform a corrosion study to demonstrate that cathodic protection is not required as

an option to installing cathodic protection. Corrosion studies must follow the following guidelines at a minimum:

(a) Corrosion studies must be completed by a professional engineer with experience in corrosion control of buried pipelines, a NACE certified corrosion specialist, or by a person knowledgeable and qualified to perform the required testing and inspection who is approved by ecology.

(b) Corrosion studies for pipelines must include at a minimum, the following:

- (i) Pipeline thickness and corrosion rate for existing pipelines;
- (ii) Presence of stray DC currents;
- (iii) Soil resistivity/conductivity;
- (iv) Soil moisture content;
- (v) Soil pH;
- (vi) Chloride ion concentration; and
- (vii) Sulfide ion concentration.

(9) All pipelines with cathodic protection are subject to the following requirements where applicable:

(a) Cathodic protection systems must be tested to determine system adequacy on an annual basis.

(b) Impressed current cathodic protection rectifiers must be inspected every two months.

(c) Where insulating devices are installed to provide electrical isolation of pipeline systems to facilitate the application of corrosion control, they must be properly rated for temperature, pressure and electrical properties, and must be resistant to the commodity carried in the pipeline system.

(d) Buried pipeline systems must be installed so that they are not in electrical contact with any metallic structures. This requirement must not preclude the use of electrical bonding to facilitate the application of cathodic protection.

(e) Tests must be carried out to determine the presence of stray currents. Where stray currents are present, measures must be taken to mitigate detrimental effects.

(10) Buried bare pipelines must be inspected in accordance with API Standard 570, section 7 (2016 with Addendum 1 (2017) and 2 (2018), and Errata 1 (2018)). Pipeline thickness and corrosion rates must be determined at an interval of no more than half of the remaining life of the pipeline as determined from corrosion rates or every five years, whichever is more frequent. Pipeline thickness and corrosion rate must be initially established by May 1997. The pipeline must be operated and inspected in accordance with ASME supplement to ASME B31G-2012 (R2017) entitled *Manual for Determining the Remaining Strength of Corroded Pipe* for transmission pipelines, API Standard 570 (2016 with Addendum 1 (2017) and 2 (2018), and Errata 1 (2018)), or another standard approved by ecology, as long as the requirements in such standard equal or exceed those required in this section.

(11) Whenever any buried section of pipeline is exposed for any reason, the operator must provide a nondestructive examination of the pipe for evidence of external corrosion. If the operator finds that there is active corrosion, the extent of that corrosion must be determined and if necessary repaired.

(12) Each facility must maintain all pumps and valves that could affect waters of the state in the event of a failure. Transfer pipeline pumps and valves and storage tank valves must be inspected annually and maintained in accordance with the manufacturers' recommendations or an industrial standard approved by ecology to ensure that

they are functioning properly. Valves must be locked when the facility is not attended. Necessary measures must be taken to ensure that valves are protected from inadvertent opening or vandalism if located outside the facility or at an unattended facility.

(13) Facilities must have the capability of detecting a transfer pipeline leak equal to eight percent of the maximum design flow rate within 15 minutes for transfer pipelines connected to tank vessels. Leak detection capability must be determined by the facility using best engineering judgment. Deficiencies with leak detection systems such as false alarms must be addressed and accounted for by the facility. Facilities may meet these requirements by:

(a) Visual inspection provided the entire pipeline is visible and inspected every 15 minutes;

(b) Instrumentation;

(c) Completely containing the entire circumference of the pipeline provided that a leak can be detected within 15 minutes;

(d) Conducting an acceptable hydrotest of the pipeline immediately before the oil transfer with visual surveillance of the exposed pipeline every 15 minutes;

(e) A combination of the above strategies; or

(f) A method approved by ecology which meets the standard identified in this section.

(14) Leak detection system operation and operator response must be described in the facility operations manual.

[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), § 173-180-340, 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), § 173-180-340, filed 9/25/06, effective 10/26/06.]