

§ 267.191

40 CFR Ch. I (7–1–08 Edition)

§ 267.191 What are the required design and construction standards for new tank systems or components?

You must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. You must obtain a written assessment, reviewed and certified by an independent, qualified registered professional engineer, following 40 CFR 270.11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:

(a) Design standard(s) for the construction of tank(s) and/or the ancillary equipment.

(b) Hazardous characteristics of the waste(s) to be handled.

(c) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:

(1) Factors affecting the potential for corrosion, such as:

(i) Soil moisture content.

(ii) Soil pH.

(iii) Soil sulfides level.

(iv) Soil resistivity.

(v) Structure to soil potential.

(vi) Existence of stray electric current.

(vii) Existing corrosion-protection measures (for example, coating, cathodic protection).

(2) The type and degree of external corrosion protection needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

(i) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.

(ii) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (for example, impressed current or sacrificial anodes) and

(iii) Electrical isolation devices such as insulating joints, flanges, etc.

(d) Design considerations to ensure that:

(1) Tank foundations will maintain the load of a full tank.

(2) Tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of § 267.18(a).

(3) Tank systems will withstand the effects of frost heave.

§ 267.192 What handling and inspection procedures must I follow during installation of new tank systems?

(a) You must ensure that you follow proper handling procedures to prevent damage to a new tank system during installation. Before placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

(1) Weld breaks.

(2) Punctures.

(3) Scrapes of protective coatings.

(4) Cracks.

(5) Corrosion.

(6) Other structural damage or inadequate construction/installation.

(b) You must remedy all discrepancies before the tank system is placed in use.

§ 267.193 What testing must I do?

You must test all new tanks and ancillary equipment for tightness before you place them in use. If you find a tank system that is not tight, you must perform all repairs necessary to remedy the leak(s) in the system before you cover, enclose, or place the tank system into use.

§ 267.194 What installation requirements must I follow?

(a) You must support and protect ancillary equipment against physical