

PERMIT ATTACHMENT L3

TANK INTEGRITY ASSESSMENT CERTIFICATION
from the Permit Application, Volume II,
Appendix I

**Triassic Park
Part B Permit Application
Tank Certification (40 CFR 264.192)**

- Proposed Tank Facilities:
- ◆ Landfill leachate tanks
 - ◆ Liquid waste storage tanks
 - ◆ Stabilization bins

REGULATORY CITATION	REGULATORY REQUIREMENT	DISCUSS OR LOCATION OF INFORMATION IN TEXT
264.192 (a)	Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with § 270.11 (d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connection, 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. This assessment, which will be used by the Regional Administrator to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:	
264.192 (a) (1)	Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed;	<p>Appendix H and Drawing 40 presents that design standards for the plastic leachate storage tanks. This indicates that the tanks are designed according to UBC standards, Structural steel – ASTM A36, Concrete – Compressive strength 2500 psi min.</p> <p>The piping systems into and out of the tanks are designed according to the piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI Standards B31.3, "Petroleum Refinery Piping," and ANSI Standard B31.4 "Liquid Petroleum Transportation Piping System" (Drawing 2).</p> <p>The design calculations for the steel mixing bins are presented in Appendix E33.</p>
264.192 (a) (2)	Hazardous characteristics of the waste(s) to be handled;	The hazardous characteristic of the waste that can be handled in the plastic tanks are presented in Appendix H. The steel mixing bins (stabilization bins) may be subjected to some reaction with the waste, however, steel is the only practical material that can be used to withstand the impact from the mixing equipment. GMI has committed to inspect the bins on daily basis to identify any impacts or damage from the waste being stored in the bins and the mixing equipment (Section 5.2.5). GMI fully realizes that these bins will have to maintained and repaired or replaced based on the results of the inspection.

<p>264.192 (a) (3)</p>	<p>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:</p> <p>(i) Factors affecting the potential for corrosion, including but not limited to:</p> <ul style="list-style-type: none"> (A) Soil moisture content; (B) Soil pH; (C) Soil sulfides level; (D) Soil resistivity; (E) Structure to soil potential; (F) Influence of nearby underground metal structures (e.g., piping); (G) Existence of stray electric current; (H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and <p>(ii) The type and degree of external corrosion protection that are 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:</p> <ul style="list-style-type: none"> (A) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.; (B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and (C) Electrical isolation devices such as insulating joints, flanges, etc. <p>[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85) – Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]</p>	<p>The liquid waste storage tanks and the leachate tanks will be construction of polyethylene and will be located fully above ground. The steel stabilization bins will be located below ground but will not be backfilled with soil. They will be founded on a concrete vault that will allow inspection in and around the tanks. Therefore, the requirement of this section will not apply.</p>
<p>264.192 (a) (4)</p>	<p>For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and</p>	<p>None of the tank systems proposed for the Triassic park facility will be underground tanks.</p>
<p>264.192 (a) (5)</p>	<p>Design considerations to ensure that:</p> <p>(i) Tank foundations will maintain the load of a full tank</p> <p>(ii) Tank systems will be anchored to prevent floatation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards § 264.18(a); and</p> <p>(iii) Tank systems will withstand the effects of frost heave.</p>	<p>(i) The drawings and design information presented in Appendix H indicate that the foundation for the tanks are design for an allowable soil bearing pressure of 1,500 psf. The soil investigation presented in Appendix D indicates that the site soils have an allow bearing capacity of 4,000 psf.</p> <p>(ii) The tanks will not be placed below the groundwater table, therefore, the anchor requirements of this section will not apply.</p> <p>(iii) The information presented in Section 3.2.1 of the permit application indicate that the potential for freezing is very low at the site and therefore, should not impact the tank system.</p>

<p>264.192 (b)</p>	<p>The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or 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 items indicated in 264.192(b).</p> <p>Inspection as Part of Construction</p> <ul style="list-style-type: none"> (1) Weld breaks; (2) Punctures; (3) Scrapes of protective coatings <p>Tanks</p> <ul style="list-style-type: none"> (1) Landfill leachate storage tank (2) Liquid waste storage tanks (3) Stabilization bins (4) Cracks; (5) Corrosion: (6) Other structural damage or inadequate construction/installation <p>All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.</p>	<p>The CQA Plan (Section XII and XIII) indicate that 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 items listed in 264.192 (c).</p>
<p>264.192 (c)</p>	<p>New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.</p>	<p>The tank systems at the Triassic Park facility will not placed underground and backfill. Therefore, the requirements of this section do not apply.</p>
<p>264.192 (d)</p>	<p>All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.</p>	<p>The CQA plan (Section XII and XIII) indicate that the tank and ancillary equipment will be tested for tightness and repaired if required.</p>
<p>264.192 (e)</p>	<p>Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.</p> <p>[Note: The piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI Standard B31.3, "Petroleum Refinery Piping," and ANSI Standard B31.4 "Liquid Petroleum Transportation Piping System," may be used where applicable, as guidelines for proper installation of piping systems].</p>	<p>The design drawings (Drawing 2) and the Part B permit application (Section 2.3) indicate that the piping systems into and out of the tanks are designed according to the piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems," or ANSI Standards B31.3, "Petroleum Refinery Piping," and ANSI Standard B31.4 "Liquid Petroleum Transportation Piping System</p>
<p>264.192 (f)</p>	<p>The owner of operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under paragraph (a)(3) of this section, or other corrosion protection if the Regional Administrator believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.</p>	<p>The liquid waste storage tanks and the leachate tanks will be construction of polyethylene and will be located fully above ground. The steel stabilization bins will be located below ground but will not be backfilled with soil. They will be founded on a concrete vault that will allow inspection in and around the tanks. Therefore, the requirement of this section will not apply.</p>

264.192 (g)	<p>The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirement of paragraphs (b) through (f) of this section, that attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section, were performed. These written statements must also include the certification statement as required in § 270.11 (d) of this Chapter.</p>	See below
270.11 (d)	<p>Certification: Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:</p> <p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submittal. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p>	<p>Signed by: _____ Patrick Corser</p> <p>Date: _____</p> <p>New Mexico PE Registration Number: <u>12236</u></p>