Oklahoma Department of Environmental Quality
Supplemental Checklist for Hazardous Waste Tanks

FACILITY _____
EPA ID# _____
DATE _____

*(**Note:** Tanks may also be subject to certain portions of 40 CFR Part 264/265, Subparts AA, BB, and CC. The appropriate supplemental checklists should also be completed)*

Identify each HW storage tank at the facility.

Existing Tanks (in service on or before July 14, 1986)	***New Tanks (in service after July 14, 1986)***

If any answer is "No," identify the tank in which the violation occurred.

Regulatory Requirements	**Area of Non-compliance**	**Remarks**
A. Existing tank requirements		
A.1. For each existing tank system without secondary containment, did the o/o obtain a written assessment that includes EACH of the following: (1) design standards, if available, according to which the tank and ancillary equipment were constructed; (2) hazardous characteristics of wastes that have been or will be handled; (3) existing corrosion protection measures; (4) documented age of the tank system (or an estimate of the age); AND (5) results of a leak test, internal inspection, or other tank integrity examination? [40 CFR 264/265.191(b)]		
A.2. Did the o/o ensure the assessment was reviewed and certified by a qualified professional engineer? [40 CFR 264/265.191(a)]		
B. New tank requirements		
B.1. For each new tank system, did the o/o obtain a written assessment that includes EACH of the following: (1) design standards according to which the tank and ancillary equipment were constructed; (2) hazardous characteristics of wastes to be handled; (3) for any external metal component that is in contact with soil or water, a determination by a corrosion protection expert of factors affecting the potential for corrosion and the type and degree of corrosion protection needed; (4) for USTs, a determination of design or operational measures that will protect the tank system from potential damage; AND (5) design considerations to ensure the tank foundations will support the load of a full tank, tanks are anchored to prevent flotation or dislodgement, and tank systems will withstand frost heave? [40 CFR 264/265.192(a)]		
B.2. Did the o/o ensure the assessment was reviewed and certified by a qualified professional engineer? [40 CFR 264/265.192(a)]		
B.3. Prior to putting the tank system into use, did the o/o obtain an inspection by an independent, qualified installation inspector or a qualified professional engineer looking for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, or other structural damage or inadequate construction/installation? [40 CFR 264/265.192(b)]		
B.4. Did the o/o ensure all discrepancies were corrected before placing the tank system into operation? [40 CFR 264/265.192(b)]		
B.5. Did the o/o ensure that any tank systems or components that are backfilled were provided with noncorrosive, porous backfill material that completely surrounds the tank and compacted to provide uniform support? [40 CFR 264/265.192(c)]		
B.6. Did the o/o ensure tanks and ancillary equipment were tested for tightness before placing into service? [40 CFR 264/265.192(d)]		
B.7. Did the o/o ensure any non-tight tanks or ancillary equipment were repaired before being placed into service? [40 CFR 264/265.192(d)]		
B.8. Has the o/o ensured ancillary equipment is supported and protected against damage and stress due to settlement, vibration, expansion, or contraction? [40 CFR 264/265.192(e)]		
B.9. Did the o/o provide the type and degree of corrosion protection recommended by an independent corrosion expert to ensure the integrity of the tank system during its use? [40 CFR 264/265.192(f)]		
B.10. Does the o/o have written statements and certifications regarding items B.1. through B.9? [40 CFR 264/265.192(g)]		

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C. Secondary Containment Requirements *(Identify the type of secondary containment and complete the appropriate sections)* ____ *External Liner* ____ *Double-walled Tank* ____ *Vault* ____ *Other DEQ-approved*		
C.1. Has the o/o installed a secondary containment system for all tanks storing hazardous waste? [40 CFR 264/265.193(a)]		
C.2. Is the secondary containment system designed, installed, and operated to prevent migration of wastes or accumulated liquid to the environment? [40 CFR 264/265.193(b)(1)]		
C.3. Is the secondary containment system capable of detecting and collecting releases and accumulated liquids? [40 CFR 264/265.193(b)(2)]		
C.4. Is the secondary containment system constructed of or lined with materials that are compatible with the wastes in the tanks? [40 CFR 264/265.193(c)(1)]		
C.5. Does the secondary containment system have sufficient strength and thickness to prevent failure due to pressure gradients, contact with waste, climatic conditions, or daily stresses due to operations? [40 CFR 264/265.193(c)(1)]		
C.6. Is the secondary containment system placed on a foundation capable of providing support and resisting failure due to settlement, compression, or uplift? [40 CFR 264/265.193(c)(2)]		
C.7. Is the secondary containment system provided with a leak detection system to detect leaks within 24 hours? [40 CFR 264/265.193(c)(3)]		
C.8. Is the secondary containment system sloped or does it use another design to drain and remove liquids within 24 hours? [40 CFR 264/265.193(c)(4)]		
C.9. Does the tank ancillary equipment meet the same secondary containment requirements of items C.2. through C.8. or is the ancillary equipment inspected daily for leaks? [40 CFR 264/265.193(f)]		
External Liner		
C.10. Is the external liner designed or operated to contain 100% of the capacity of the largest tank? [40 CFR 264/265.193(e)(1)(i)]		
C.11. Is the external liner: *(Identify which standard is met)* ___ designed or operated to prevent run-on? [40 CFR 264/265.193(e)(1)(ii)] OR ___ designed with sufficient excess capacity to contain 100% of the capacity of the largest tank plus the precipitation of a 24-hour, 25-year rainfall event? [40 CFR 264/265.193(e)(1)(ii)]		
C.12. Is the external liner free of cracks or gaps? [40 CFR 264/265.193(e)(1)(iii)]		
C.13. Is the external liner designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with waste if released from the tank? [40 CFR 264/265.193(e)(1)(iv)]		
Vault		
C.14. Is the vault system designed or operated to contain 100% of the capacity of the largest tank within its boundary? [40 CFR 264/265.193(e)(2)(i)]		
C.15. Is the vault system: *(Identify which standard is met)* ___ designed or operated to prevent run-on? [40 CFR 264/265.193(e)(2)(ii)] OR ___ designed with sufficient excess capacity to contain 100% of the capacity of the largest tank plus the precipitation of a 24-hour, 25-year rainfall event? [40 CFR 264/265.193(e)(2)(ii)]		
C.16. Is the vault system constructed with chemical-resistant water stops at all joints (if any)? [40 CFR 264/265.193(e)(2)(iii)]		
C.17. Is the vault system provided with an impermeable interior coating or lining that is compatible with stored wastes and will prevent migration of waste into the concrete? [40 CFR 264/265.193(e)(2)(iv)]		
C.18. Is the vault system provided with a means to protect against formation of and ignition of vapors if storing ignitable or reactive wastes? [40 CFR 264/265.193(e)(2)(v)]		
C.19. Is the vault system provided with an exterior moisture barrier or otherwise designed to prevent migration of moisture into the vault, if the vault is subject to hydraulic pressure? [40 CFR 264/265.193(e)(2)(vi)]		

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Double-walled Tank		
C.20. Is the double-walled tank designed as an integral structure so that any release from the inner tank is contained by the outer shell? [40 CFR 264/265.193(e)(3)(i)]		
C.21. If constructed of metal, is the double-walled tank protected from corrosion of both the primary tank interior and the external surface of the outer shell? [40 CFR 264/265.193(e)(3)(ii)]		
C.22. *(Identify which standard is met)* ___ Is the double-walled tank provided with a built-in continuous leak detection system capable of detecting a release within 24 hours? [40 CFR 264/265.193(e)(3)(iii)] OR ___ Has the o/o obtained DEQ's agreement that the existing detection technology or site conditions do not allow detection of a release within 24 hours? [40 CFR 264/265.193(e)(3)(iii)]		
DEQ-approved Variance		
C.23. If any answer to items C.1. through C.22 is "No," has the o/o obtained a variance from the DEQ for those requirements? [40 CFR 264/265.193(g)		
C.24. Does the o/o maintain and operate a DEQ-approved secondary containment system in accordance with all provisions of the DEQ-approved variance? [DEQ approval dated _____] *(Briefly describe the approved system and any discrepancies found)*		
D. General Operations and Inspections		
D.1. Does the o/o ensure that HW or treatment reagents don't cause the tanks or inner liners to rupture, leak, corrode, or otherwise fail? [40 CFR 264/265.194(a)]		
D.2. Does the o/o use appropriate controls and practices to prevent spills and overflows from tank or containment systems (e.g. spill prevention controls, overfill prevention controls, sufficient freeboard)? [40 CFR 264/265.194(b)]		
D.3. Does the o/o ensure EACH of the following are inspected at least once each operating day: (1) data gathered from monitoring and leak detection equipment; (2) above ground portions to detect corrosion or releases; and (3) construction materials and area immediately surrounding the tank system (including secondary containment)? [40 CFR 264.195(b) & (c)/265.195(a) & (b)] *(**Note:** Items (2) and (3) may be inspected weekly if a leak detection system is used to alert facility personnel of leaks, or if procedures are in place to ensure leaks are promptly identified)*		
D.4. For tank systems with cathodic protection systems, does the o/o ensure EACH of the following are evaluated: (1) proper operation of the cathodic protection system within 6 months of initial installation; (2) proper operation of the cathodic protection system at least annually; AND (3) all sources of impressed current at least every other month? [40 CFR 264.195(g)/265.195(f)]		
D.5. Does the o/o maintain records demonstrating compliance with items D.3. and D.4.? [40 CFR 264.195(h)/265.195(g)]		
E. Response to Leaks or Spills *(**Note:** The following procedures are required if there is a condition that caused a leak/spill of HW from a tank. Leaks or spills ≤ 1 pound and immediately cleaned up are exempt from these requirements) If none, skip to Section G.* *Identify the date(s), nature, and quantity of the release(s).*		
E.1. Did the o/o immediately remove the tank system or secondary containment system from service? [40 CFR 264/265.196]		
E.2. Did the o/o immediately stop the flow of HW into the tank system or secondary containment? [40 CFR 264/265.196(a)]		
E.3. Did the o/o inspect the system to determine the cause? [40 CFR 264/265.196(a)]		
E.4. Did the o/o remove HW from the tank system or secondary containment: *(Identify which standard is met)* ___ within 24 hours? [40 CFR 264/265.196(b)] OR ___ at the earliest practical time to prevent further release and to inspect/repair the system? [40 CFR 264/265.196(b)(1) and (b)(2)]		
E.5. Did the o/o conduct a visual inspection of the release so as to prevent migration of material to the soil or surface water? [40 CFR 264/265.196(c)(1)]		

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E.6. Did the o/o remove and properly dispose of any visible contamination of the soil or surface water? [40 CFR 264/265.196(c)(2)]		
E.7. Did the o/o notify DEQ of the release within 24 hours? [40 CFR 264/265.196(d)(1)]		
E.8. Did the o/o submit a report to the DEQ within 30 days that documents: (1) the likely route of migration of the release; (2) characteristics of surrounding soils; (3) results of any monitoring or sampling conducted; (4) proximity to downgradient drinking water, surface water, and population areas; AND (5) response actions taken or planned? [40 CFR 264/265.196(d)(3)]		
E.9. After a leak or release was detected, did the o/o: *(Identify which standard is met)* ___ repair the cause of the leak or release? [40 CFR 264/265.196(e)] OR ___ close the tank or tank system? [40 CFR 264/265.196(e)]		
E.10. When extensive repairs were necessary, did the o/o obtain a certification by a qualified professional engineer that the repaired system is capable of being returned to its intended HW management service? [40 CFR 264/265.196(f)]		
F. Ignitable, Reactive, or Incompatible Wastes *(**Note:** Not applicable unless storing ignitable, reactive, or incompatible wastes in tanks)*		
F.1. Does the o/o perform at least ONE of the following: (1) treat the waste so that it no longer ignitable or reactive and while so doing, ensure mixing of incompatible wastes and or materials is performed in a manner to prevent the generation of: extreme heat, pressure, fire/explosion, violent reaction, uncontrolled toxic vapors or dust, uncontrolled flammable fumes, damage to structural integrity, or other problems that threaten human health or the environment; OR (2) store or treat the waste in a way that protects it from any material or condition that may cause the waste it ignite or react; OR (3) use the tank system solely for an emergency? [40 CFR 264/265.198(a)]		
F.2. Does the o/o comply with the protective distance requirements of Tables 2-1 through 2-6 of NFPA's "Flammable and Combustible Liquids Code," (1977 or 1981)? [40 CFR 264/265.198(b)]		
F.3. Does the o/o ensure mixing of incompatible wastes and or materials is performed in a manner to prevent the generation of: extreme heat, pressure, fire/explosion, violent reaction, uncontrolled toxic vapors or dust, uncontrolled flammable fumes, damage to structural integrity, or other problems that threaten human health or the environment? [40 CFR 264/265.199 → 264/265.17(b)]		