

**SOLID & HAZARDOUS WASTE DIVISION  
STORAGE TANK PROGRAM (STP)  
GUIDANCE DOCUMENT #18**

**SUBJECT:** **Underground Storage Tank (UST), Aboveground Storage Tank (AST), and Non-Regulated (Diesel Exhaust Fluid (DEF) and Heating Oil) UST Installation/Modification Inspections**

**SCOPE:** This guidance document explains when an installation/modification inspection is to be conducted by STP personnel and defines the different installation/modification inspection phases. This guidance document also explains STP responsibilities when a non-regulated UST is installed, such as a DEF tank or heating oil tank, which may be used for a regulated use in the future. If there is a conflict between this guidance document and any rule or regulation, the rule or regulation will prevail.

It is the responsibility of the STP Compliance Supervisor to determine whether or not an installation/modification will require an inspection by STP personnel. This guidance document identifies the parameters to be used by the STP Compliance Supervisor to make the determination.

**INTRODUCTION:** Wyoming Statute Title 35 Chapter 11 Article 14 and Wyoming Water Quality Rules and Regulations Chapter 17 define requirements for tank installations. This Guidance Document provides assistance to STP inspectors during tank and piping installations to ensure the statute, rules, and regulations are met.

**GUIDELINES:**

**1. Installations/Modifications Requiring STP Inspections.**

**A.** There are numerous modifications to tank systems that may require an inspection, such as the installation of new leak detection equipment or the replacement of piping.

**B.** Facility owners/operators or tank installers shall contact the STP Compliance Section to determine if an installation/modification requires an inspection by STP personnel.

**C.** If piping is cut back or extended, a precision tightness test must be conducted by a licensed tester prior to the piping being brought back into use. If a UST is repaired or modified by adding a penetration or riser, a tank tightness test must be completed by a licensed tester. The modified system is not to be operated until after the STP has issued written authorization to operate.

**D.** The following is a list of installations/modifications that typically require an inspection by STP personnel:

- The installation of new tanks
- The installation of new piping
- Tank modifications

- Piping modifications
- Cathodic protection (CP) system installations or major CP modifications, such as replacing a galvanic anode system with an impressed current system (including instances where the CP repair/installation requires removing tank cover material)
- Installation of new tank leak detection equipment
- Installation of new line leak detection equipment
- Replacement of an automatic tank gauging system with a different model (e.g., replacing an Incon™ ATG system with a Veeder Root™ ATG system, or a TLS-350™ monitor with a TLS-450™ monitor)
- Installation of new spill prevention equipment (overflow prevention devices)
- Installation of new spill protection equipment (spill buckets or catchment basins)
- Replacement of dispenser pans
- Replacement of turbine sumps
- Installation or repair in response to an enforcement case

## 2. **Installations/Modifications that do not Typically Require an Installation Inspection.**

The following repairs or modifications do not typically require inspection by STP personnel:

- Emergency piping repairs
- Emergency tank repairs
- Installation of new dispensers (with all work being completed above the shear valve)
- Repairs to dispensers (with all work being completed above the shear valve)
- Replacement of a line leak detector with one of similar type or design, such as replacing a mechanical line leak detector with another mechanical line leak detector (the leak detector must be function tested by a licensed tester prior to bringing it into service)
- Replacement of an hour meter, voltage meter, or amperage meter on a CP rectifier
- CP repairs, such as the replacement of existing anodes or the replacement of an existing rectifier, provided the repairs are designed by a licensed CP expert (this does not include instances requiring excavation of materials covering the tanks and/or piping)
- Electrical work, such as the installation of conduit or wiring connections
- Replacement or repairs to vent piping
- Replacement of spill protection equipment (spill buckets or catchment basins)
- Replacement of manhole or spill bucket retaining rings
- Installation of stage I vapor recovery systems
- Replacement of flex connectors
- Turbine repairs

**3. New UST Installations.** The following is a summary of what is inspected by the STP during the different phases of a regulated UST installation. The Phase I inspection is to determine if the tank is set properly. The Phase II inspection is to determine the piping has been installed properly. The Phase III inspection is the final inspection prior to operating the tank system. A newly installed or substantially modified tank system shall not be operated until the STP has issued written authorization to operate. New UST and piping installations will be documented using the attached checklist. After all

three phases of inspection are completed and the STP inspector has determined that the installation meets standards, written authorization to operate will be issued. If only the piping is being replaced at a site, Phase II and Phase III inspections shall be conducted.

**A. Phase I Inspection (USTs).** All new and replacement tanks shall be double wall or clad steel, and all portions of the tanks that routinely contain product shall be interstitially monitored. During the inspection, the STP inspector will observe and document the following (if applicable):

**i. Prior to Setting Tank**

- Tank is double walled and will be interstitially monitored
- The installer has verified that the tank is compatible with product stored
- The tank manufacturer, model number, capacity, dimensions, serial number, UL serial number, and to what specification the tank was manufactured to (e.g., UL-1316)
- Tank was not compromised or damaged during shipping
- If tank was shipped under vacuum, the tank has not lost vacuum
- If tank has dry interstice, it is pressure tested and soap tested
- If tank has brine filled interstice, there is no brine on the outside of the tank
- Tank basin is properly constructed with adequate tank clearances and proper bedding material is in place
- Adequate deadmen are in place
- Tank deflection readings (if required)
- Proper backfill material is used

**ii. After Tank Has Been Set**

- Deadmen are properly attached
- Steel portions of the deadmen and the anchoring straps are protected from corrosion with dielectric coating or CP
- The tank haunches are backfilled properly with no voids and even support is provided

**B. Phase II Inspection (Piping).** All new or replacement piping shall be double wall and interstitially monitored (this does not include emergency repairs). Anytime an owner/operator lengthens or shortens a run of single wall piping, he/she shall replace it with double-wall piping with sumps, under dispenser containment, and sump sensors. New suction systems are required to have sump sensors. If an emergency repair is made, the damaged piping shall be replaced with the same material. **To determine if the piping was damaged during backfill, pressure shall remain on the interstice of the underground piping until the Phase III inspection.** During the inspection, the STP inspector will observe and document the following (if applicable):

- Piping type, manufacturer, and model number
- Installer has verified that the piping is compatible with the product stored
- The piping is installed properly

- The primary piping holds pressure (at least 1.5 times operating pressure)
- The piping interstice holds pressure (3-5 PSI)
- The pipe fittings pass a soap test
- The sumps and under dispenser containment pass an integrity test (water test with water level above the highest penetration)
- Vent piping is adequately configured
- Stage I Vapor Recovery equipment is installed properly

**C. Phase III Inspections (Final Inspection):** Phase III is the final inspection before written authorization to operate is issued. During the inspection, the STP inspector will observe and document the following (if applicable):

- Installer has verified that the equipment is compatible with the product stored
- The sumps and under dispenser containment sumps were not damaged or compromised if new conduit or other penetrations were added after initial integrity test (a second integrity test shall be conducted)
- The piping interstice maintained pressure after being covered
- Make, model and type of tank leak detector probes
- Make, model and type of line leak detectors
- Sump sensors function properly
- Spill buckets have not been compromised during backfill
- Overfill device type, make and model
- Dispensers and fire valves are anchored properly
- Automatic tank gauging (ATG) system brand, model number, serial number, and manufacture date
- System setup printout from the ATG
- **The interstice on the underground piping has maintained pressure after backfill placement is complete**
- Installer has loosened the piping pressure test boots, removed the valve stems, or removed the valve stem cores to ensure that if the primary piping fails, the secondary piping will convey product to the turbine sumps or under dispenser containment pans where the sump sensors are located.

**4. New AST Installations:** Before any new regulated AST is installed, a plan review must be conducted by the Wyoming State Fire Marshal's office. The following is a summary of what is inspected by the STP during the different phases of an AST installation. The Phase I inspection is to determine if the tank is set properly. The Phase II inspection is to determine the piping has been installed properly. The Phase III inspection is the final inspection prior to operating the tank system. Newly installed or substantially modified tank systems shall not be operated until the STP has issued written authorization to operate. New AST and piping installations will be documented using the attached AST installation checklist. If the tank system is pre-manufactured, self-contained, with aboveground piping (such as the type used at airports), only one inspection may be required.

**A. Phase I Inspection:** This inspection is completed when the AST is set in place. During the inspection, the STP inspector will observe and document the following (if applicable):

- The installer has verified that the tank is compatible with the product stored

- The tank is properly labeled
- The tank manufacturer, model number, capacity, dimensions, serial number, UL serial number and what specification the tank was manufactured to (e.g., UL-2085) (The International Fire Code [IFC] requires all new tanks to be protected and the tank capacity shall not exceed 15,000 gallons [IFC 2226.2.3.]
- Foundation designed and stamped by a Wyoming P.E.
- Tank is isolated from ground contact or has cathodic protection installed
- All penetrations are on top of the tank; unless the tank is taller than 12 feet
- The tank has emergency venting

**B. Phase II Inspection (Piping):** All aboveground piping connected to ASTs shall be steel. All underground piping connected to ASTs shall be double wall and non-corrodible. **To determine if the piping was damaged during backfill, pressure shall remain on the interstice of the underground piping until the Phase III inspection.** If all piping is aboveground, the piping may be inspected during the Phase III inspection. During the inspection, the STP inspector will observe and document the following (if applicable):

- Piping type, manufacturer (for underground piping), and model number (for underground piping)
- The installer has verified that the piping is compatible with product stored
- The piping is installed properly
- Transition sumps are located where underground piping is connected to aboveground piping
- The primary piping holds pressure (at least 1.5 times operating pressure)
- The double-wall piping interstice holds pressure (3-5 PSI)
- The pipe fittings pass a soap test
- The sumps and under dispenser containment pass an integrity test (water test with water level above the highest penetration)
- Vent piping is adequately configured
- Stage I Vapor Recovery equipment is installed properly

**C. Phase III Inspections (Final Inspection):** This is the final inspection before authorization to operate is issued. During the inspection, the STP inspector will observe and document the following (if applicable):

- The installer has verified that the equipment is compatible with the product stored
- The sumps and under dispenser containment sumps were not damaged or compromised if new conduit or other penetrations were added after initial integrity test (a second integrity test shall be conducted)
- The piping interstice maintains pressure after being covered
- Make, model and type of tank leak detector probes
- Make, model and type of line leak detectors
- Sump sensors function properly
- Overfill device type, make, and model
- Overfill alarm type, make, and model

- Dispensers and fire valves are anchored properly
- Automatic tank gauging (ATG) system (if equipped) brand, model number, serial number, and manufacture date
- System setup printout from the ATG monitor (if equipped)
- Secondary containment is impermeable and fireproof
- Secondary containment can contain 110% of the capacity of the largest AST
- Type of impact prevention
- Type of corrosion protection (isolated from ground contact or cathodic protection)
- Type of spill prevention used (catchment basin or the fill piping is completely located within the secondary containment structure)
- Fill lines have a double check valve to prevent backflow
- Tanks have an all-weather label that includes: name and address of tank manufacturer, year of manufacture, capacity of tank, and tank construction standard (e.g., UL-2085)
- Signs indicating product type
- No smoking signs
- Access to tank top is by permanently mounted, solidly constructed, non-combustible, ladder, catwalk, or platform
- Access to tank top must meet OSHA standards
- Fencing is galvanized wire mesh that is at least 6-feet high and topped with three strands of barbed wire (unless prohibited by local jurisdiction such as NPS)
- Fencing is located no less than 5 feet from tanks
- Tanks are lit 24 hours a day (EPA requirement)
- Site has a prominently marked emergency shutoff switch
- Tanks have a Spill Prevention Control and Countermeasures (SPCC) Plan
- **The interstice on the underground piping has maintained pressure after backfill placement is complete**

**5. Manufacturer's Instructions.** Tank and piping installations and modifications shall be completed in accordance with manufacturer's Instructions. A copy of the manufacturer's piping and/or tank installation instructions will be submitted to the STP prior to installation, and a copy of these instructions will be kept onsite whenever installation activities are conducted.

**6. Emergency Repairs:** If an emergency repair has been made due to a leak from a UST or piping, a tank or line tightness (precision) test must be completed by a licensed tester prior to resuming operation. This is to ensure that the repairs are adequate. The owner/operator/installer is required to immediately notify the STP of the emergency and submit information to the STP regarding the repairs within 5 working days of the emergency. These repairs may include, but are not limited to, spill bucket replacement, CP anode replacement, piping repairs, and tank repairs. Piping repairs are to be made with a like material.

**7. Non-Regulated Tank Installation Inspections:** When a tank is installed for a non-regulated use, such as to store diesel exhaust fluid (DEF) or heating oil, and the STP did not inspect the installation of the tank, the tank may not be used for a regulated use at a later time. If the owner/operator anticipates using the tank in the future to store a regulated substance, he/she may request the STP inspect the installation of the non-regulated tank.

**A. DEF Tank Installation:** If an owner/operator chooses to have STP personnel inspect the installation of a DEF tank, the inspector will perform a Phase I UST installation inspection, in accordance with section 3.A. of this Document. Phase II and Phase III inspections will not be completed, as the piping and other tank equipment will not be configured for a regulated use. The owner will be invoiced an installation fee of \$250.00, in accordance with WS 35-11-1420(c). The tank will be entered in the STP database as a non-federally regulated tank, permanently out of use, date installed will be the date of inspection, date closed will be the same date, and closure status will be “changed to a non-regulated use.” Documentation of the installation inspection report will be kept in the facility file in Cheyenne.

**B. Converting a DEF UST System to Store a Regulated Substance:** If the STP inspected the installation of a DEF tank, the tank may later be used to store a regulated substance provided the tank was compatible with the product that was previously stored and is compatible with the new product. The tank may not be used to store a regulated product until the STP issues authorization to operate. The inspector shall observe and document the following (if applicable):

- The installation of the tank was inspected by the STP, in accordance with Section 3.A. of this document
- The tank has been cleaned out
- The installer has determined the tank is compatible with the product to be stored
- The tank has new piping installed and the installation has been inspected by STP personnel in accordance Section 3.B. of this document
- All additional equipment has been installed and inspected in accordance with Section 3.C. of this document
- The tank meets all standards outlined in WWQRR, Chapter 17

**C. Heating Oil UST Installation:** An owner/operator may connect an emergency power generator (EPG) to a heating oil UST if the UST was inspected when it was installed. A Phase I inspection must be completed in accordance with Section 3.A. at the time the UST was installed. If the owner/operator desires to use the piping and any other equipment for a regulated use at a later time, a Phase II and Phase II inspection must also be completed at the time the original equipment is installed. The owner will be invoiced an installation fee of \$250.00, in accordance with WS 35-11-1420(c). The tank will be entered in the STP database as a non-federally regulated tank, permanently out of use, date installed will be the date of inspection, date closed will be the same date, and closure status will be “changed to a non-regulated use.” A copy of the installation inspection report will be kept in the facility file.

**D. Connecting an EPG to a Heating Oil Tank:** If all three installation inspections as described in Section 3 of this Document were initially completed by STP personnel and the EPG is connected to existing aboveground piping, a final inspection must be completed to verify that nothing has changed since the initial inspections. If nothing has changed, the inspector may issue authorization to operate the tank system. If new underground piping and other equipment is installed, inspections in accordance with Sections 3.B. and 3.C. of this Document must be conducted. After the STP inspector has determined that the installation meets the requirements of WWQRR, Chapter 17, written authorization to operate will be issued.

att. UST Installation Checklist  
AST Installation Checklist

**Wyoming Department of Environmental Quality  
Solid and Hazardous Waste Division  
Storage Tank Program**



**UNDERGROUND STORAGE TANK (UST)  
INSTALLATION INSPECTION**

**Manufacturer's installation instructions for tank(s) and/or piping submitted prior to installation  
(mandatory)**

Facility ID No.: \_\_\_\_\_

UST Owner/Operator Name/Address

UST Installer (Field Foreman)/Company Name/Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone No.: \_\_\_\_\_

Phone No.: \_\_\_\_\_

UST Location:

Installer's License Number: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone No.: \_\_\_\_\_

STP Inspector(s): \_\_\_\_\_

Inspection Dates:

Description

Phase I \_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

Phase II \_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

Phase III \_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_

\_\_\_ New Installation \_\_\_ Modification Tank Numbers: \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_





**SITE SKETCH**

Facility No.: \_\_\_\_\_ Location: \_\_\_\_\_  
(Tank numbers should be the same as on the Notification Form)



**III. TYPE OF OWNER**

- |   |  |
|---|--|
| <input type="checkbox"/> Federal Government | <input type="checkbox"/> Private (no retail) |
| <input type="checkbox"/> State Government   | <input type="checkbox"/> Military            |
| <input type="checkbox"/> Local Government   | <input type="checkbox"/> Contractor          |
| <input type="checkbox"/> Commercial         | <input type="checkbox"/> Farm                |

**IV. INDIAN LANDS**

- Tanks are located on land within an Indian Reservation or on other trust lands. Tribe or Nation:
- Tanks are owned by native American nation or tribe.

**V. TYPE OF FACILITY**

DO YOU SELL PETROLEUM RETAIL?

- |  |  |  |   |  |
|--|--|--|---|--|
| <input type="checkbox"/> Private Vehicle Fueling | <input type="checkbox"/> Private Aviation Fuel | <input type="checkbox"/> Commercial        | <input type="checkbox"/> Fixed Base Operator  | <input type="checkbox"/> Commercial Vehicle Fueling  |
| <input type="checkbox"/> Petroleum Distributor   | <input type="checkbox"/> Local Government      | <input type="checkbox"/> Industrial        | <input type="checkbox"/> Lubrication Facility | <input type="checkbox"/> Emergency Generator Fueling |
| <input type="checkbox"/> Air Taxi (Airline)      | <input type="checkbox"/> State Government      | <input type="checkbox"/> Contractor        | <input type="checkbox"/> Residential          | <input type="checkbox"/> Other                       |
| <input type="checkbox"/> Aircraft Owner          | <input type="checkbox"/> Federal Non-Military  | <input type="checkbox"/> Truck/Transporter | <input type="checkbox"/> Farm                 | _____  |
| <input type="checkbox"/> Auto Dealership         | <input type="checkbox"/> Federal Military      | <input type="checkbox"/> Utilities         | <input type="checkbox"/> Railroad             | Other _____  |

**VI. CONTACT PERSON IN CHARGE OF TANKS**

Name	Job Title	Address	Phone	E-Mail Address
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**VII. FINANCIAL RESPONSIBILITY**

- A. Are you eligible for the STATE FUND Program?  Yes (current on ALL (fees)  No  
(If "No", documentation must be provided to the division for one of the mechanisms listed below under "C".)
- B. Has \$30,000 financial assurance for third party liability been obtained in accordance with W.S. 35-11-1428?  
 Yes  No  Exempt (state or federal government)
- C. Which of the following forms of financial assurance are you using?  
Self-Insured: \_\_\_\_\_ Trust Fund: \_\_\_\_\_  
Insurance: \_\_\_\_\_ Not Listed: \_\_\_\_\_

**VIII. CERTIFICATION (Read and sign after completing all sections)**

**Penalties**

**Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based upon my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete.

Name and official title of owner or owner's authorized representative (print)	Signature	Date Signed
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**IX. TANK INFORMATION: TANK DESCRIPTION AND MATERIAL - WY Facility ID Number**

Tank	Tank Status			Tank Material											Tank Info				AST Specifications												
	Date of Installation	* Permanently out of use	* Temporarily out of use	Steel	Cathode - SAS	Cathode - IPS	Asphalt Coated	Galvanized	Composite (steel/FG)	Concrete	Epoxy coated steel	FG reinforced plastic	Polyethylene tank jacket	Double walled	Excavation liner	Lined interior	* Other	Repaired	Compartmentalized	Manifolded	Special Use Emergency Power	Heating Only??	Tank is Empty???	Above ground tank	Earthen Dike w/ Liner	Earthen Dike w/o Liner	Concrete Dike w/ liner	Concrete Dike w/o liner	No Spill Diking	Spill Ponds	
Tank 1																															
Tank 2																															
Tank 3																															

Additional Comments:

**X. COMPARTMENT INFORMATION - WY Facility ID Number**

Tank	Compartment	Substances Stored										Capacity Estimated Capacity (gallons)	Other			
		Currently or last stored in greatest quantity by volume											Overfill device install	Spill device installed	Manifolded	
		Gasoline	Diesel	Gasohol	Kerosene	Heating Oil	Used Oil	* Other	* Hazardous	* Mixture	Other, Hazardous, Mixture (please specify CERCLA name or CAS num if Hazardous)	Ball check	Overfill alarm	Butterfly		
Tank 1	1															
Tank 1	2															
Tank 2	3															
Tank 2	4															
Tank 3	5															
Tank 3	6															

Additional Comments:

**XI. PIPING INFORMATION - WY Facility ID Number**

Tank	Compartment	Pipe	Pipe Material							Piping Constr.			Pump Type						
			Bare Steel	Galvanized Steel	F/G reinforced plastic	Copper	Flexible Plastic	Not Listed	None	Above Ground Piping	Unknown	Cathodically Prot. SAS	Cathodically Prot. ICS	Double Walled	Secondary Containment	* Safe Suction	U.S. Suction	Pressurized	Gravity
Tank 1	1																		
Tank 1	2																		
Tank 2	3																		
Tank 2	4																		
Tank 3	5																		
Tank 3	6																		

Additional Comments:

**XII. LEAK DETECTION FOR COMPARTMENTS - WY Facility ID Number**

Tank ID	Compartment	Compartment Leak Detection Method											Other (please specify)	
		Manual tank gauging	Tank tightness testing	Inventory controls	Automatic tank gauging	Vapor monitoring	Groundwater monitorin	SIR	Interstitial	Passive Acoustic	Continuous in Tank	Other method per DEQ		Monthly/ Tracer Testing
Tank 1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 1	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments:

**XIII. LEAK DETECTION FOR PIPING - WY Facility ID Number**

Pipe Description	Compartment	Pipe	Pipe Leak Detection Method										Other (please specify)		
			Groundwater Monitorin	Vapor Monitoring	Mechanical LLD	Electronic LLD	Sump sensor	Pressure Tested	Line tightness testing	SIR	Other method per DEQ	Not Listed		Exempt	
Tank 1	1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 1	2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments:

**UNDERGROUND STORAGE TANK (UST) PHASE I  
NON-CORRODIBLE TANK INSTALLATION CHECKLIST**

**References Used to Develop this Checklist:**

Petroleum Equipment Institute; PEI/RP 100 and National Fire Protection Association; NFPA 30

Facility Number: \_\_\_\_\_

Date: \_\_\_\_\_

**COMMENTS/SUMMARY:**

A. \_\_\_\_ Received equipment/material Submittal/Registration

B. Tank Identification

**Tank Number** \_\_\_\_\_  
(Same as on Notification Form)

Tank Construction \_\_\_\_\_  
(FRP/Clad/Comp)

UL tank label number \_\_\_\_\_

Manufacturer \_\_\_\_\_

Model # \_\_\_\_\_

Product Stored \_\_\_\_\_

Tank capacity (gal) \_\_\_\_\_

Compartment Sizes \_\_\_\_\_

Manifolded \_\_\_\_\_  
(note which other tank or compartment it is manifolded to)

**Tank Number** \_\_\_\_\_  
(Same as on Notification Form)

Tank Construction \_\_\_\_\_  
(FRP/Clad/Comp)

UL tank label number \_\_\_\_\_

Manufacturer \_\_\_\_\_

Model # \_\_\_\_\_

Product Stored \_\_\_\_\_

Tank capacity (gal) \_\_\_\_\_

Compartment Sizes \_\_\_\_\_

Manifolded \_\_\_\_\_  
(note which other tank or compartment it is manifolded to)

C. Tank Pre-Installation Inspection (All Tanks)

- \_\_\_ Tank(s) visually inspected for damage (scrapes, dents, gouges, holes, etc.). Composite steel tanks inspected for coating damage with any damage marked for repair and holiday testing.
- \_\_\_ Temporary plugs and thread protectors installed by the manufacturer have been removed and replaced with permanent plugs at all unused openings. Metal plugs have been protected with a protective coating.
- \_\_\_ All openings are in the top of the tank.

D. Tank Pre-Installation Testing

- \_\_\_ Interstice vacuum check (tanks normally shipped with at least 5.3 inches Hg (17.9 kPa) vacuum on the interstice in accordance with NFPA 30).  
Prior to burial: \_\_\_ Inches/mm Hg                      Date: \_\_\_\_\_  
After backfill: \_\_\_ Inches/mm Hg                      Date: \_\_\_\_\_

If any vacuum reading is significantly less than the level specified by the manufacturer at shipment, the tank must be rejected and manufacturer notified immediately.

- \_\_\_ Tank with liquid filled interstice
  - \_\_\_ Exterior of tank(s) inspected for signs of interstitial fluid leakage; no leakage detected.
  - \_\_\_ Fluid level in interstice reservoir is at proper level.
  - \_\_\_ If inner tank air pressure test is recommended by manufacturer, test performed at 3-5 psig for at least 1 hour; no bubbles detected in interstice reservoir during the test.
  - \_\_\_ If tank is delivered without vacuum, air pressure test performed on inner tank at 3-5 psig for at least 1 hour; no pressure drop with fittings soap tested.
  - \_\_\_ If tank is delivered without vacuum, air pressure test performed on interstice at 3-5 psig for at least 1 hour; no pressure drop with fittings soap tested. Vacuum may be applied to 5.3 inches and holds for 1 hour, in lieu of pressure test.
- \_\_\_ Tested in accordance with manufacturer's recommendations (optional)

**Installation and Backfill**

A. Anchoring/Placement

- \_\_\_ UL Recommends that the depth of cover from top of finished grade to top of tank must not exceed 7 feet.
- \_\_\_ Concrete deadmen anchors.

\_\_\_ Deadman anchors are positioned outside the tank diameter.

\_\_\_ For gasoline, diesel, gasohol, or biodiesel tanks, 12-inch minimum clearance between side of tank and wall of any basement and 3-foot minimum clearance between side of tank and any property line that can be built upon. (FRP 18 inches minimum clearance between tanks and between tanks and excavation walls for tanks less than 12-foot diameter; 24 inches for tanks 12-foot diameter or greater)

\_\_\_ Metallic tie-down loops, turn buckles or cables are coated or wrapped with dielectric material.

\_\_\_ Tie-down straps used with anchor pad or deadman anchors are electrically isolated from the tank; isolating pads are at least 1 inch wider than the tie-down straps.

**NOTE: State regulations require that all tanks be anchored with deadmen anchors designed for the maximum buoyancy of the tank if it is fully submerged. Tanks can also be anchored to a concrete slab directly under the tank).**

B. Backfill Bedding/Backfill Material (in accordance with manufacturer's recommendations)

\_\_\_ Sand

\_\_\_ Pea Gravel

\_\_\_ Crushed Stone

**NOTE: Recommended bedding/backfill maximum size is 3/4-inch for pea gravel and 1/2-inch for crushed stone.**

**UNDERGROUND STORAGE TANK (UST) PHASE II  
NON-CORRODIBLE PIPING, VALVES & FITTINGS CHECKLIST**

**References Used to Develop this Checklist:**

Petroleum Equipment Institute; PEI/RP 100, PEI/RP 300, PEI/RP 1200, and NFPA 30

Facility Number: \_\_\_\_\_

Date: \_\_\_\_\_

COMMENTS/SUMMARY:

**Piping Type**

**Application**

	Fill	Product Delivery	Vent
FRP single-wall	_____	<u>N/A</u>	_____
FRP double-wall	_____	_____	_____
Flexible piping double-wall	_____	_____	_____

Brand/Type: \_\_\_\_\_

**NOTE: Be sure to notify installer that pressure is to be maintained on interstice of underground piping until the Phase III inspection. This is to ensure that the piping was not damaged during backfill placement.**

**Trenching and Backfill Requirements (Unless Specifically Allowed in Manufacturer's Instructions)**

- \_\_\_\_\_ Minimum 6 inches of well-compacted bedding.
- \_\_\_\_\_ Multiple piping runs in same trench separated by at least twice the pipe diameter and 6 inches between the pipe and trench walls.
- \_\_\_\_\_ Sharp rocks, debris, ice, temporary bracing, etc. removed from trenches prior to backfilling and compaction.

**NOTE: Recommend that some form of trace/locate material be used for future utility locate purposes.**

**Piping Installation Requirements**

A. All Piping

- \_\_\_\_\_ If tanks are manifold, piping is minimum 3-inch diameter.
- \_\_\_\_\_ Manufacturer certification shows piping is compatible with the stored product.
- \_\_\_\_\_ No lines are crossed; if crossing lines is unavoidable, manufacturer has been consulted for minimum clearance between lines (NFPA 30 requires a minimum separation of 6 inches).
- \_\_\_\_\_ Sensors are located in under dispenser containment (UDC) sumps, transition sumps, and

- \_\_\_\_\_ STP sumps.
- \_\_\_\_\_ Piping interstice is continuous and has single drain point at location of sensors.
- \_\_\_\_\_ Piping slopes back to tank at 1/8-inch per foot, unless manufacturer offers alternatives.
- \_\_\_\_\_ FRP joints are straight and not “cocked.”

B. Y / N Flexible Non-Metallic Piping

- \_\_\_\_\_ Installed in accordance with manufacturer’s instructions, copy attached.
- \_\_\_\_\_ Piping runs are continuous from sump to sump.
- \_\_\_\_\_ All piping connections are made at sumps or are accessible from surface.
- \_\_\_\_\_ Piping installed with no kinking or twisting; manufacturer’s recommended maximum bending radius has not been exceeded.

C. Underground Piping System Testing

- \_\_\_\_\_ Piping is physically isolated from the tank(s) and dispensers prior to testing.
- \_\_\_\_\_ Primary piping pressurized with compressed air to 150% of the maximum anticipated pressure, but not less than 50 psig for one 1 hour.
- \_\_\_\_\_ Secondary containment piping pressurized with compressed air to at least 5 psig for 1 hour, unless manufacturer recommends other pressure rate.
- \_\_\_\_\_ While pressurized, all joints and connections soaped and carefully inspected for bubbles, unless connections are located within containment sumps and are submerged.
- \_\_\_\_\_ Piping remains pressurized after backfilling and during the rest of construction to provide a warning of possible construction damage to piping.

D. Vent Piping

- \_\_\_\_\_ Outlets discharge upward, are a minimum of 12 feet above the ground surface, or, if attached to a building, a minimum of 3 feet above the roof at points of attachment and a minimum of 5 feet from any building opening or powered air intake.
- \_\_\_\_\_ Outlets are located so that vapors will not accumulate or travel to unsafe areas, enter buildings or be trapped under eaves.
- \_\_\_\_\_ Above ground piping is protected from physical damage.
- \_\_\_\_\_ Nominal pipe diameter is minimum 2 inches.

**Sumps and Under Dispenser Containment (UDC)**

- \_\_\_\_\_ Fill sumps and UDCs with water to 4 inches above the highest sump/UDC penetration or sidewall seam. Water level marked and or measured water level stayed constant for at least 1 hour, unless highest penetration does not allow.
  
- \_\_\_\_\_ Check all external UDC and sump fittings/boots to see if they are wet (dry the fittings off then run your hands over them to make sure that fittings are tight).

**Stage I Vapor Recovery System**      Y/N

- \_\_\_\_\_ Two-Point System
  
- \_\_\_\_\_ Coaxial System

**NOTE: If manufacturer specifies different testing procedures, attach manufacturer's procedure and explain in comments section.**

COMMENTS:

**UNDERGROUND STORAGE TANK (UST) PHASE III  
LEAK DETECTION, SPILL PREVENTION CHECKLIST**

**References Used to Develop this Checklist:**

Petroleum Equipment Institute; PEI/RP 100, PEI/RP 300, PEI/RP 1200, and NFPA 30

Facility Number: \_\_\_\_\_

Date: \_\_\_\_\_

COMMENTS/SUMMARY:

**General**

\_\_\_\_ Fire/Sheer valves present and anchored.

**Collision Protection/Site Security**

\_\_\_\_ All above ground piping is firmly supported and protected from collision damage.

**Leak Detection and Spill Prevention Equipment**

A. **Tank Leak Detection Methods**

**New Tanks**

\_\_\_\_ Interstitial monitoring (double-wall/jacketed/composite): Required for all new tank installations.

\_\_\_\_ Liquid sensors within the interstice that can be easily removed for testing or replacement  
**(Manual monitoring cannot be used on new tank installations)**

\_\_\_\_ Hydrostatic system (brine)

ATG Model # \_\_\_\_\_ Brand Name or Manufacturer \_\_\_\_\_

ATG Serial # \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_ Attach system setup printout

**Existing Tanks**

\_\_\_\_ Automatic tank gauging (must be capable of detecting 0.2 gph leak rate and be combined with inventory control in accordance with WWQRR Chp 17, Sec 16(d)). Readout checked to determine unit is connected and functioning properly.

ATG Model # \_\_\_\_\_ Brand Name or Manufacturer \_\_\_\_\_

ATG Serial # \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_ Attach system setup printout

B. Piping

Type

\_\_\_ Pressurized lines.

\_\_\_ U.S. suction lines.

\_\_\_ Safe suction lines.

Leak Detection (New Piping)

\_\_\_ Sump sensors (required on all new piping).

\_\_\_ Liquid tight tank top sumps with sensors.

\_\_\_ Liquid tight dispenser sumps with sensors.

\_\_\_ Continuous alarm sensor in the sump located to ensure it will detect and alarm due to a 3.0 gal/hr leak in 1 hour.

\_\_\_ System disables pump or alarms.

\_\_\_ Alarm connected to ATG.

\_\_\_ Alarm can be heard in employee occupied area.

\_\_\_ Alarm tested and functioning for all sensors.

\_\_\_ Sump sensors placed where piping slopes to.

\_\_\_ Sump sensors placed at both ends of piping.

\_\_\_ Jumpers used to ensure interstitial continuity and sump sensors placed at lowest point of piping.

\_\_\_ Interstice on underground piping maintains pressure and was not damaged during backfill placement (either the piping has maintained pressure since Phase II or the interstice should hold pressure of 5 psi for at least 1 hour, unless manufacturer recommends different pressure).

\_\_\_ Installer has loosened the piping pressure test boots, has removed the valve stems, or has removed the valve stem cores to ensure that if the primary piping fails, the secondary piping will convey product to the turbine sumps or under dispenser containment pans where the sump sensors are located.

New Leak Detection (**Existing Piping**)

\_\_\_ Sump Sensors.

\_\_\_ Liquid tight tank top sumps with sensors.

\_\_\_ Liquid tight dispenser sumps with sensors.

- Sensor is located in the sump to ensure it will detect and alarm a 3.0 gal/hr leak in 1 hour.
- System disables pump or alarms.
- Alarm connected to ATG.
- Alarm can be heard in employee occupied area.
- Alarm tested and functioning for all sensors (document on chart below).
- Sump sensors placed where piping slopes.
- Sump sensors placed at both ends of piping.
- Jumpers used to ensure interstitial continuity and sump sensors placed at lowest point of piping.

Brand and Model Number: \_\_\_\_\_

Electronic Line Leak Detectors

Brand and Model Number: \_\_\_\_\_

- All leak detectors functioned properly with 3 gph simulated leak.

Mechanical Line Leak detectors

Brand and Model Number: \_\_\_\_\_

- All leak detectors functioned properly with 3 gph simulated leak.
- Line tightness test performed and all lines passed (0.1 gph at 1-1/2 times operating pressure).

C. Overfill and Spill Prevention

Overfill protection installed.

Brand: \_\_\_\_\_

Type/Model: \_\_\_\_\_

- Butterfly/Flapper valves.
- Alarm systems (product level sensor set to alarm when tank is 90% full).
  - Provides visual and audible alarm to delivery person.
  - Located in close proximity to delivery area.
  - Clearly labeled so delivery person knows what alarm is for.

- \_\_\_ Ball float valve installed in tank just below the vent opening set to restrict flow when tank is 90% full (**not recommended because EPA will require periodic function testing**).
- \_\_\_ Installed in extractable fittings to allow access for maintenance and tightness testing.
- \_\_\_ Fill/drop tube terminates within 6 inches of tank bottom.

**NOTES:** Ball float valves are not to be used if there is the possibility of a pumped delivery into a tank if the system is equipped with suction pumps and air eliminators, or tanks equipped with remote fill pipes and gauge openings, or emergency generator tanks.

Vent restriction devices will not work when coaxial Stage I vapor recovery is used unless special fittings are installed.

- \_\_\_ Spill prevention installed.
- \_\_\_ Spill bucket.
  - \_\_\_ Single wall - hydrostatic test.
  - \_\_\_ Double wall - vacuum test (in accordance with manufacturer recommendations).
- \_\_\_ Containment basin in lieu of spill bucket.
- \_\_\_ Drainage system tied to oil water separator.

**Post Inspection Information**

- \_\_\_ Completed tank notification form. Obtain signatures of owner and installer.
- \_\_\_ Installer oath signed.
- \_\_\_ Owner/operator must get a liquid status printout from ATG monitor every month or keep a monthly interstitial monitoring log. The log must include date, time, and person checking system. They must document that there are no alarms visible.
- \_\_\_ Notified owner of requirement to test sump sensors each year.
- \_\_\_ Notified owner/operator of licensing requirements (90 days to get licensed storage tank operator).

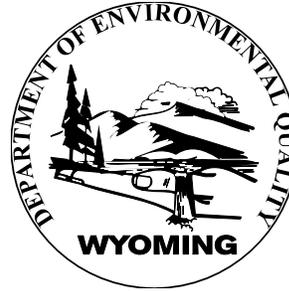
**Operator's Annual Inspection (OAI)**

- \_\_\_ Notified owner/operator of requirements for operator's annual inspection and what has to be submitted to the department.
  - \_\_\_ Annual sump sensor function testing results.
  - \_\_\_ Requirements for visual inspection.
  - \_\_\_ Annual function testing of interstitial probes.

- \_\_\_ Check of ATG probes and ATG calibration.
- \_\_\_ Copies of previous year's tank leak detection records.
- \_\_\_ CP testing (if required).

**Comments:**

**Wyoming Department of Environmental Quality  
Solid and Hazardous Waste Division  
Storage Tank Program**



**ABOVE GROUND STORAGE TANK (AST) INSTALLATION INSPECTION**

Facility ID No.: \_\_\_\_\_

**Manufacturer's installation instructions for tank(s) and/or piping submitted prior to installation  
(Mandatory)**

AST Owner/Operator Name/Address

Installation Company Name/Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone No.: \_\_\_\_\_

Phone No.: \_\_\_\_\_

AST Location:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Licensed AST Installer: \_\_\_\_\_

License Number: \_\_\_\_\_ Exp: \_\_\_\_\_

Phone No.: \_\_\_\_\_

STP Inspector(s): \_\_\_\_\_

Inspection Dates:

Description

Phase I \_\_\_/\_\_\_/\_\_\_

\_\_\_/\_\_\_/\_\_\_

Phase II \_\_\_/\_\_\_/\_\_\_

\_\_\_/\_\_\_/\_\_\_

Phase III \_\_\_/\_\_\_/\_\_\_

\_\_\_/\_\_\_/\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ New Installation \_\_\_ Modification Tank Numbers: \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_





**SITE SKETCH**

Facility ID No.: \_\_\_\_\_ Location: \_\_\_\_\_  
(Tank numbers should be the same as on the Notification Form)

<b>NOTIFICATION OF STORAGE TANKS</b>	<b>WY FAC ID Number</b>
Wyoming DEQ/SHWD, 122 West 25th Street, Cheyenne, WY 82002	STATE USE ONLY
<b>TYPE OF NOTIFICATION</b>	<b>DATE RECEIVED</b>
<input type="checkbox"/> New Facility or Initial Registration <input type="checkbox"/> Amended or Annual Renewal <input type="checkbox"/> Closure	A. Date Entered into Computer
<b>INSTRUCTIONS</b>	B. Data Entry Clerk
Please type or print in ink all items except "signature" in section VIII. This form must be completed for each location containing underground storage tanks. If additional tanks are owned at this location, update this form and staple continuation sheets to the form as necessary. If there are any mistakes on the form as received, please make these corrections in red.	C. Owner was contacted to clarify responses, comments

**GENERAL INFORMATION**

Notification is required by State Law for all underground tanks that have been used to store regulated substances since January 1, 1986, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986; and for all above ground storage tanks that have been used to dispense gasoline or diesel to the public after July 1, 1994. This information is required by W.S. 35-11-1419 and 35-11-1420.

The primary purpose of this notification program is to locate and evaluate storage tanks that store or have stored petroleum or hazardous substances and are regulated by this program.

**Who Must Notify?**

W.S. 35-11-1419 as amended, requires that, unless exempted, either the owner or the operator of storage tanks that store regulated substances must notify Wyoming DEQ/SHWD of the existence of their tanks. Owner means:

- a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that day, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances,
- b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use, and
- c) in the case of an above ground storage tank, owner means any person who owns an above ground storage tank meeting the definition found in W.S. 35-11-1415(a)(ix) or any facility that has undergone changes to facility information or tank system status.

For either above ground or underground storage tanks, operator means any person in control of or having responsibility for the daily operation of the tank.

**Where to Notify?**

Send completed notification forms to the address listed on top of the form.

**What Tanks are Included?**

Underground storage tank is defined as any one or a combination of tanks that (1) is used to contain an accumulation of "regulated substances", and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Underground tanks storing 1. Gasoline, used oil, or diesel fuel, petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), and 2. This includes any substance defined as hazardous in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA.

Above ground storage tank is defined as any one or combination of containers, vessels and enclosures, including structures and appurtenances connected to them, constructed of nonferrous materials including support, the volume of which including the pipes connected thereto is more than 90% above the surface of the ground, which is used by a dealer to dispense gasoline or diesel fuels. Dealer means any person meeting the definition of W.S. 39-17-101(a) or 39-17-201(a)(iv)

**When to Notify?**

1. When a tank is installed, removed, or modified, the department must be verbally notified at least thirty days prior to tank installation, removal, or modification so that an inspection can be scheduled. When the department has issued a written approval of the installation or modification, this form should be submitted within thirty (30) days.
2. When a change in service occurs such as when tank is emptied and placed in Temporarily Out of Use status (TOU) or is brought back into service.
3. When a facility has changed operators or ownership that fact should be reported to the department on a change of ownership form. It is not necessary to file an amended notification form at that time.

<b>I. OWNER/OPERATOR OF TANK(S)</b>	<b>II. LOCATION OF TANKS</b>
<input style="width: 95%; height: 25px;" type="text"/> Owner Name	<input style="width: 95%; height: 25px;" type="text"/> Facility Name
<input style="width: 95%; height: 25px;" type="text"/> Address	<input style="width: 95%; height: 25px;" type="text"/> Address
<input style="width: 95%; height: 25px;" type="text"/> City, State Zip (County)	<input style="width: 95%; height: 25px;" type="text"/> City, State, Zip (County)
<input style="width: 95%; height: 25px;" type="text"/> Phone	<input style="width: 45%; height: 25px;" type="text"/> Phone
	<input style="width: 45%; height: 25px;" type="text"/> Longitude
	<input style="width: 45%; height: 25px;" type="text"/> Latitude

**III. TYPE OF OWNER**

- |   |  |
|---|--|
| <input type="checkbox"/> Federal Government | <input type="checkbox"/> Private (no retail) |
| <input type="checkbox"/> State Government   | <input type="checkbox"/> Military            |
| <input type="checkbox"/> Local Government   | <input type="checkbox"/> Contractor          |
| <input type="checkbox"/> Commercial         | <input type="checkbox"/> Farm                |

**IV. INDIAN LANDS**

- Tanks are located on land within an Indian Reservation or on other trust lands. Tribe or Nation:
- Tanks are owned by native American nation or tribe.

**V. TYPE OF FACILITY**

DO YOU SELL PETROLEUM RETAIL?

- |  |  |  |   |  |
|--|--|--|---|--|
| <input type="checkbox"/> Private Vehicle Fueling | <input type="checkbox"/> Private Aviation Fuel | <input type="checkbox"/> Commercial        | <input type="checkbox"/> Fixed Base Operator  | <input type="checkbox"/> Commercial Vehicle Fueling  |
| <input type="checkbox"/> Petroleum Distributor   | <input type="checkbox"/> Local Government      | <input type="checkbox"/> Industrial        | <input type="checkbox"/> Lubrication Facility | <input type="checkbox"/> Emergency Generator Fueling |
| <input type="checkbox"/> Air Taxi (Airline)      | <input type="checkbox"/> State Government      | <input type="checkbox"/> Contractor        | <input type="checkbox"/> Residential          | <input type="checkbox"/> Other                       |
| <input type="checkbox"/> Aircraft Owner          | <input type="checkbox"/> Federal Non-Military  | <input type="checkbox"/> Truck/Transporter | <input type="checkbox"/> Farm                 | _____  |
| <input type="checkbox"/> Auto Dealership         | <input type="checkbox"/> Federal Military      | <input type="checkbox"/> Utilities         | <input type="checkbox"/> Railroad             | Other _____  |

**VI. CONTACT PERSON IN CHARGE OF TANKS**

Name	Job Title	Address	Phone	E-Mail Address
------	-----------	---------	-------	----------------

**VII. FINANCIAL RESPONSIBILITY**

- A. Are you eligible for the STATE FUND Program?  Yes (current on ALL (fees)  No  
(If "No", documentation must be provided to the division for one of the mechanisms listed below under "C".)
- B. Has \$30,000 financial assurance for third party liability been obtained in accordance with W.S. 35-11-1428?  
 Yes  No  Exempt (state or federal government)
- C. Which of the following forms of financial assurance are you using?  
Self-Insured: \_\_\_\_\_ Trust Fund: \_\_\_\_\_  
Insurance: \_\_\_\_\_ Not Listed: \_\_\_\_\_

**VIII. CERTIFICATION (Read and sign after completing all sections)**

**Penalties**

**Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based upon my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete.

Name and official title of owner or owner's authorized representative (print)

Signature

Date Signed

**IX. TANK INFORMATION: TANK DESCRIPTION AND MATERIAL - WY Facility ID Number**

Tank	Tank Status			Tank Material											Tank Info				AST Specifications												
	Date of Installation	*Permanently out of use	*Temporarily out of use	Steel	Cathode - SAS	Cathode - IPS	Asphalt Coated	Galvanized	Composite (steel/FG)	Concrete	Epoxy coated steel	FG reinforced plastic	Polyethylene tank jacket	Double walled	Excavation liner	Lined interior	*Other	Repaired	Compartmentalized	Manifolded	Special Use Emergency Power	Heating Only??	Tank is Empty???	Above ground tank	Earthen Dike w/ Liner	Earthen Dike w/o Liner	Concrete Dike w/ liner	Concrete Dike w/o liner	No Spill Diking	Spill Ponds	
Tank 1																															
Tank 2																															
Tank 3																															

Additional Comments:

**X. COMPARTMENT INFORMATION - WY Facility ID Number**

Tank	Compartment	Substances Stored										Capacity Estimated Capacity (gallons)	Other							
		Currently or last stored in greatest quantity by volume											Overfill device install		Spill device installed	Manifolded				
Other, Hazardous, Mixture (please specify CERCLA name or CAS num if Hazardous)											Ball check	Overfill alarm	Butterfly							
Gasoline	Diesel	Gasohol	Kerosene	Heating Oil	Used Oil	*Other	*Hazardous	*Mixture												
Tank 1	1																			
Tank 1	2																			
Tank 2	3																			
Tank 2	4																			
Tank 3	5																			
Tank 3	6																			

Additional Comments:

**XI. PIPING INFORMATION - WY Facility ID Number**

Tank	Compartment	Pipe	Pipe Material							Piping Constr.				Pump Type						
			Bare Steel	Galvanized Steel	F/G reinforced plastic	Copper	Flexible Plastic	Not Listed	None	Above Ground Piping	Unknown	Cathodically Prot. SAS	Cathodically Prot. ICS	Double Walled	Secondary Containment	*Safe Suction	U.S. Suction	Pressurized	Gravity	
Tank 1	1																			
Tank 1	2																			
Tank 2	3																			
Tank 2	4																			
Tank 3	5																			
Tank 3	6																			

Additional Comments:

**XII. LEAK DETECTION FOR COMPARTMENTS - WY Facility ID Number**

Tank ID	Compartment	Compartment Leak Detection Method											Other (please specify)	
		Manual tank gauging	Tank tightness testing	Inventory controls	Automatic tank gauging	Vapor monitoring	Groundwater monitorin	SIR	Interstitial	Passive Acoustic	Continuous in Tank	Other method per DEQ		Monthly/ Tracer Testing
Tank 1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 1	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments:

**XIII. LEAK DETECTION FOR PIPING - WY Facility ID Number**

Pipe Description	Compartment	Pipe	Pipe Leak Detection Method										Other (please specify)		
			Groundwater Monitorin	Vapor Monitoring	Mechanical LLD	Electronic LLD	Sump sensor	Pressure Tested	Line tightness testing	SIR	Other method per DEQ	Not Listed		Exempt	
Tank 1	1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 1	2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 2	4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tank 3	6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments:

**ABOVEGROUND STORAGE TANK (AST)  
PHASE I  
TANK INSTALLATION CHECKLIST**

**References Used to Develop this Checklist:**

- Petroleum Equipment Institute: PEI/RP 200
- International Fire Code 2012
- Wyoming Water Quality Rules and Regulations, Chapter 17

**Facility Name:** \_\_\_\_\_ **Facility ID Number:** \_\_\_\_\_

COMMENTS:

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**General**

- \_\_\_\_\_ Received copy of plans and specifications and reviewed them (optional)
- \_\_\_\_\_ Fire Marshal performed plan review (mandatory for new installations)
- \_\_\_\_\_ New ASTs cannot exceed a 12,000 gallon capacity (IFC 2306.2.3)(does not apply to airports)
- \_\_\_\_\_ Total above ground aggregate capacity may not exceed 48,000 gallons (IFC 2306.2.3)(does not apply to airports)

**Pre-Installation Inspection and Testing**

A. Tank Composition

- \_\_\_\_\_ Unprotected steel
- \_\_\_\_\_ Fire protected/resistant steel
- \_\_\_\_\_ Impact protected
- \_\_\_\_\_ Other (Specify)

**NOTE:** Tanks designed for underground use **MAY NOT** be used for aboveground storage or in vaults.

B. Tank Identification

Tank Number (Same as on Notification Form)	1	2	3	4	5
UL tank label number	_____	_____	_____	_____	_____
Manufacturer	_____	_____	_____	_____	_____
Model #	_____	_____	_____	_____	_____
Product stored	_____	_____	_____	_____	_____
Tank capacity (gal)	_____	_____	_____	_____	_____
Tank measurements (LxD in feet)	_____	_____	_____	_____	_____
Compartmented	_____	_____	_____	_____	_____
Single-Wall	_____	_____	_____	_____	_____
Double-Wall	_____	_____	_____	_____	_____
Double Bottom	_____	_____	_____	_____	_____
Vertical Tank	_____	_____	_____	_____	_____
Horizontal Tank	_____	_____	_____	_____	_____
Tank Specification (construction standard; e.g., UL-2085, Etc.)	_____	_____	_____	_____	_____

- \_\_\_ Tanks have weather proof permanent label with name and address of manufacturer, date of manufacture or recertification, capacity, and tank construction standard used
- \_\_\_ Tank material is compatible with substance to be stored

**NOTES:**     **Tanks must be welded steel; they cannot be bolted or riveted.**  
**ASTs MAY NOT be connected to USTs.**

C. Tank Pre-Installation Inspection

- \_\_\_ Tank(s) visually inspected for damage (scrapes, dents, gouges, holes, coating damage, etc.). Any damage is repaired and holiday tested, as necessary.
- \_\_\_ If tank is a UL-2085 tank, is there certification from the manufacturer that the tank is vehicle impact resistant? (If not, they have to install impact prevention.)
- \_\_\_ All tank openings must be located on the top of the tank, unless taller than 11 feet.
- \_\_\_ Tank must have top access via ladders/walkways that are constructed of non-combustible materials.
- Y / N Tanks in Vaults (above grade or below grade):
- \_\_\_ Vault walls and floor are constructed of reinforced concrete; at least 6-inches thick.
- \_\_\_ All vault openings are liquid tight.

- \_\_\_ At least 1 opening is designed for personnel entry that is at least 30 inches in diameter and equipped with a locking, non-sparking cover and hazard warning signs.
- \_\_\_ Tank vents extend outside the vault to at least 12-feet above grade and are located at least 5- feet from building openings.
- \_\_\_ Adequate air ventilation is provided across the tank within each vault.
- \_\_\_ Above-grade vaults are protected from vehicular collision through the use of bollards, posts, curbs or berms.
- \_\_\_ Tanks are anchored to withstand uplifting by water infiltration.
- \_\_\_ Each vault entry point is secured against unauthorized entry and vandalism.
- \_\_\_ Each tank has tank top access.

D. Tank Pre-Installation Testing

Y / N Single-Wall Tanks:

- \_\_\_ Pressure test in accordance with manufacturer's recommendations (generally max. 5 PSI) for 1 hour.
- \_\_\_ Remove, dope, and reinstall factory-installed plugs.
- \_\_\_ Vents and gauge hatches secured (prevent pressure loss).
- \_\_\_ If a vertical tank, loosen anchoring bolts to allow base to expand.
- \_\_\_ Soap test all fittings and welds.

Y / N Double-Wall Tanks:

- \_\_\_ Tank with empty interstice at atmospheric pressure.
  - \_\_\_ Interstice tested hydrostatically or with air pressure at 3 to 5 psig for 1 hour. Soapy water solution applied to all surfaces, seams and fittings; carefully inspecting for air bubbles prior to placing tank on foundation. No leaks detected.
  - \_\_\_ Tank with vacuum on the interstice.
- \_\_\_ Interstice vacuum check (tanks normally shipped with at least 5.3 inches Hg vacuum on the interstice).
  - Initial vacuum (from shipping documents): \_\_\_ inches Hg
  - Vacuum prior to installation: \_\_\_ inches Hg
- \_\_\_ Testing to manufacturer's specifications (other than above). Specify testing requirements in comments field and attach manufacturer's testing requirements.

**NOTE: If any vacuum gauge reading is significantly less than the level specified by the manufacturer at shipment, the tank must be rejected and the manufacturer notified immediately.**

## **Tank Separations and Setbacks**

### A. Unprotected tanks

- \_\_\_ Minimum distance between tanks is 3 feet.
- \_\_\_ Minimum distance between any tank and the nearest important building on the property is 50 feet.
- \_\_\_ Minimum distance from any tank to the nearest dispenser is 50 feet.
- \_\_\_ Minimum distance from any tank to a property line is 100 feet.
- \_\_\_ Minimum distance from any tank to the nearest public roadway is 50 feet.

### B. Protected or vaulted tanks containing quantities of 6,000 gallons or less

- \_\_\_ Minimum distance between tanks is 3 feet.
- \_\_\_ Minimum distance between any tank and the nearest important building on the property is 5 feet.
- \_\_\_ Minimum distance from any tank to the nearest dispenser is 25 feet.
- \_\_\_ Minimum distance from any tank to a property line is 15 feet.
- \_\_\_ Minimum distance from any tank to the nearest public roadway is 5 feet.

### C. Protected or vaulted tanks containing quantities greater than 6,000 gallons.

- \_\_\_ Minimum distance between tanks is 3 feet.
- \_\_\_ Minimum distance between any tank and the nearest important building on the property is 15 feet.
- \_\_\_ Minimum distance from any tank to the nearest dispenser is 25 feet.
- \_\_\_ Minimum distance from any tank to a property line is 25 feet.
- \_\_\_ Minimum distance from any tank to the nearest public roadway is 15 feet.
- \_\_\_ Minimum distance between any tank and an LP-gas container is 20 feet.
- \_\_\_ Suitable means, such as diking, diversion curbs or grading, are provided to prevent accumulation of released fluids under adjacent LPG containers.

## **Tank Foundation and Supports**

### A. General

- \_\_\_ Tank foundation is designed to minimize the possibility of uneven tank settling and minimize corrosion in any part of the tank resting on the foundation.

- \_\_\_ Tank foundation must be designed by a Wyoming registered professional engineer.
- \_\_\_ Tanks located in areas subject to flooding must be secured to the foundation or restraining pad with sufficient weight to prevent tank flotation at the maximum anticipated water level.
- \_\_\_ Tank system is grounded and bonded to prevent static accumulation and discharge.

B. Horizontal Tanks

- \_\_\_ Horizontal tank saddle supports are constructed of (circle one) reinforced concrete or protected steel. Saddles are isolated from the tank shell with dielectric material.

**Secondary Containment**

A. Y / N Dikes

Dike dimensions are \_\_\_ ft. long X \_\_\_ ft. wide X \_\_\_ ft. high.

- \_\_\_ Diked area is capable of containing 110% of the volume of the largest tank within the containment area, plus the volume that is displaced by other tanks within the containment area below the height of the dike wall.

Impervious barrier is fireproof and constructed of (tank must be placed on barrier or tank must have double bottom):

- \_\_\_ Impermeable geosynthetic clay liner
- \_\_\_ Impermeable bentonite barrier
- \_\_\_ Impermeable reinforced concrete slab
- \_\_\_ Impermeable geosynthetic liner (40 mil reinforced/60 mil unreinforced)
- \_\_\_ The outside base of the dike at ground level is at least 10 feet from any property line.

B. Y / N Remote impounding (separate spill containment area)

- \_\_\_ A slope of not less than 1 foot per 8 linear feet (1%) away from the tank(s) is provided for at least 50 feet toward the impounding area.
- \_\_\_ The impounding area has a holding capacity not less than 110% of the largest tank that drains to it.
- \_\_\_ The drainage system route is located such that if the released liquid were ignited, the fire would not seriously expose tanks or adjoining property.
- \_\_\_ The impounding area is located so that, if filled to capacity, the liquid level will not be closer than 50 feet from any property line.

**NOTES: Storage of combustible materials, empty or full drums or barrels is not permitted within the diked area.**



**ABOVEGROUND STORAGE TANK (AST) PHASE II  
PIPING, VALVES & FITTINGS INSTALLATION CHECKLIST**

**References Used to Develop this Checklist:**

Petroleum Equipment Institute: PEI/RP 200 and PEI/RP 300  
National Fire Protection Association: NFPA 30 and 30A

Facility Name: \_\_\_\_\_ Facility ID Number: \_\_\_\_\_

**Aboveground Piping and Fittings**

A. <u>Piping Type</u>	<u>Application</u>				
	Vapor Recovery	Fill	Product Delivery	Vent	Valves/ Fittings
Steel pipe isolated from ground contact by non-corrosive material	_____	_____	_____	_____	_____
Cathodically Protected Steel	_____	_____	_____	_____	_____
Cathodically protected coated or Wrapped Steel	_____	_____	_____	_____	_____
Stainless or galvanized Steel	_____	_____	_____	_____	_____
Steel pipe isolated from ground contact by non-corrosive material	_____	_____	_____	_____	_____

Brand/Type: \_\_\_\_\_

**NOTES: All above ground lines are required to be steel (WWQRR, Chapter 17, Section 35 (h)). Galvanized pipe should not be used for diesel fuel, jet fuel or kerosene, either underground or aboveground. Aboveground portions of vent and vapor recovery piping systems should only be schedule 40 galvanized pipe. Piping and all piping components must be fully compatible with the products being stored.**

B. Aboveground Piping Installation

- \_\_\_\_\_ All piping connected at tank top (required if tank is less than 11 feet high).
- \_\_\_\_\_ Piping materials inspected prior to installation for shipping and handling damage.
- \_\_\_\_\_ Manufacturer certification shows piping is compatible with the stored product.
- \_\_\_\_\_ Appropriate product compatible pipe dope or sealant used; sealant is compatible with alcohol and ether-based compounds present in motor fuels.
- \_\_\_\_\_ Adequate clearance provided between piping and dike walls, conduits, and other system components.

- \_\_\_ Piping and conduit routed over dike top; if penetration of dike wall or floor is unavoidable, the penetration is sleeved and sealed liquid tight.
- \_\_\_ Piping firmly supported using fire resistant hangers, supports, or brackets.
- \_\_\_ Transition sumps are installed wherever piping goes below grade.
- \_\_\_ Fill piping all contained within secondary containment.
  - \_\_\_ If not it has its own means to control spillage (spill bucket, etc.)

C. Aboveground Valves and Fittings

- \_\_\_ Product dispensing is accomplished by a suction or pressure pumping system and not by pressurizing the tank or by gravity flow.
- \_\_\_ All connections and components are liquid tight, and valves and fittings are securely supported.
- \_\_\_ Pressurized pumping systems are properly anchored and fire/sheer valve is installed in dispenser.
- \_\_\_ Dispenser islands are elevated a minimum of 6 inches above the finished driveway (unless there is impact prevention no less than 4 feet from dispensers).
- \_\_\_ Dispensers are a minimum of 25 feet from the AST, unless used for fueling aircraft.
- \_\_\_ Dispensers are a minimum of 10 feet from buildings and property lines.

D. Testing Aboveground Piping

**NOTE: Piping that has previously contained hazardous, flammable or combustible liquids should not be tested with air unless it has first been purged and made safe.**

- \_\_\_ Piping is isolated from tanks and dispensers.
- \_\_\_ Piping tested at 150% of normal operating pressure, but not less than 50 psig for 1 hour; all joints soaped and inspected for bubbles.

E. Corrosion Protection for Aboveground Piping

- \_\_\_ Piping isolated from ground contact.

F. Vapor Recovery System (required if gasoline throughput is over 100,000 gallons a month)

Y/N Stage I System (Tank to Delivery Truck)

- \_\_\_ Two-Point System: Separate vapor recover riser pipe installed in tank with dry break vapor hose connection.

- \_\_\_\_\_ Coaxial System: Coaxial drop tube used at each tank fill.
- \_\_\_\_\_ Manifoldded System: Vapor recovery piping from multiple tanks are manifolded together and tied to a single vapor recovery riser pipe.

**Underground Piping and Fittings (All Underground Product Piping Must be Double-Wall and Non- Corrodible)**

A. <u>Piping Type</u>	<u>Application</u>		
	Vapor Rec	Product Delivery	Vent
Flexible piping (double-wall)	_____	_____	_____
FRP double-wall	_____	_____	_____
FRP single-wall	_____	_____	_____
Cathodically protected bare steel	_____	_____	_____
Cathodically protected coated or wrapped steel	_____	_____	_____
Corrosion-resistant steel (eg, stainless or galvanized)	_____	_____	_____
Steel pipe isolated from ground contact by non-corrosive material	_____	_____	_____

Piping Brand/Type: \_\_\_\_\_

**NOTES:** Galvanized pipe should not be used for diesel fuel, jet fuel or kerosene, either underground or aboveground.  
 Aboveground portions of vent piping systems should only be schedule 40 galvanized pipe; FRP or flexible piping materials should not be used.

B. Trenching and Backfill Requirements, All Piping Types

Trench size allows for:

- \_\_\_\_\_ Multiple piping runs in same trench are separated by at least twice the pipe diameter, and there is 6 inches between the pipe and trench walls.
- \_\_\_\_\_ Bedding/backfill material is well-compacted material, such as clean sand or pea gravel (maximum size of 3/4 inch).
- \_\_\_\_\_ Sharp rocks, debris, ice, temporary bracing, etc. is removed from trenches prior to backfilling and compaction.
- \_\_\_\_\_ After backfilling, trenches have been clearly marked and protected to prevent damage to piping from excavation, grade stakes or other construction work. Recommend foil backed tape be used for later location.

\_\_\_ Piping location documented in as-built drawings or photographs.

C. Installation Requirements for All Piping

\_\_\_ Manufacturer's certification shows piping is compatible with the stored product.

\_\_\_ Installer inspected piping for shipping and handling damage.

\_\_\_ Piping is run in a single trench between tank area and dispensers following the shortest practical route.

\_\_\_ No lines are crossed; if crossing lines is unavoidable, manufacturer installation instructions must show that this is acceptable.

\_\_\_ Minimum uniform slope of 1/8-inch per foot towards sump with sensor, with no sags or humps. If not, a sensor should be placed at both ends of piping.

\_\_\_ Appropriate adhesives on hand and manufacturer's instructions followed for joining piping and fittings, including surface preparation, temperature and moisture considerations, and curing are carefully followed.

\_\_\_ Metallic fittings cathodically protected or isolated from contact with the soil.

\_\_\_ FRP joints are straight and not "cocked."

\_\_\_ Installed in accordance with manufacturer's instructions, copy attached.

\_\_\_ Piping runs are continuous from sump to sump.

\_\_\_ All flexible piping connections are made at sumps or are accessible from surface.

\_\_\_ Piping installed with no kinking or twisting; manufacturer's recommended maximum bending radius has not been exceeded

D. Vent Piping Installation Requirements

\_\_\_ Outlets discharge upwards, are a minimum of 12 feet above the ground surface, or, if attached to a building, a minimum of 3 feet above the roof at points of attachment and a minimum of 5 feet from any building opening or powered air intake.

\_\_\_ Outlets are located so that vapors will not accumulate or travel to unsafe areas, enter buildings or be trapped under eaves.

\_\_\_ Above ground piping is schedule 40 galvanized steel and is protected from physical damage by traffic or other sources.

\_\_\_ Nominal pipe diameter is minimum 2 inches.

E. Vapor Recovery Piping Installation Requirements

- \_\_\_ Piping is minimum 2-inch diameter between dispenser and tank; 3-inch diameter required on balance systems if more than 6 fueling points share a common vapor return pipe.
- \_\_\_ Tank fill pipe risers are 4-inch diameter schedule 40 steel.
- \_\_\_ Tank vapor recovery risers are 3 to 4-inch schedule 40 steel.

F. Containment Sumps

- \_\_\_ Liquid tight sumps are installed beneath each dispenser.
- \_\_\_ Liquid tight transition sumps are provided where aboveground piping goes underground.
- \_\_\_ All sump penetrations are liquid tight.
- \_\_\_ Intermediate sumps used between dispenser sumps and transition sumps to maintain proper slope.
- \_\_\_ All sumps hydrostatically tested with all sump penetrations underwater and are tested for least 1 hour.

G. Underground Piping System Testing

- \_\_\_ Piping is physically isolated from the tank(s) and dispensers prior to testing.
- \_\_\_ Primary piping pressurized with compressed air to 150% of the maximum anticipated operating pressure, but not less than 50 psig for 1 hour.
- \_\_\_ Secondary containment piping pressurized with compressed air to at least 5 psig for 1 hour.
- \_\_\_ While pressurized, all joints and connections soaped and carefully inspected for bubbles. For nonmetallic rigid or flexible pipe, entire pipe should be soaped.
- \_\_\_ Secondary containment remains pressurized at 5 PSI after backfilling and during the rest of construction to provide warning of possible construction damage.

**NOTE: If manufacturer specifies different testing procedures, attach manufacturer's procedure and explain in comments section.**

COMMENTS:

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**ABOVEGROUND STORAGE TANK (AST) PHASE III  
LEAK DETECTION, SPILL PREVENTION, CORROSION PROTECTION  
CHECKLIST**

**References Used to Develop this Checklist:**

Petroleum Equipment Institute: PEI/RP 200 and PEI/RP 300

National Fire Protection Association: NFPA 30 and 30A

Facility Name: \_\_\_\_\_ Facility ID Number: \_\_\_\_\_

**General**

- \_\_\_ All tanks have no smoking signs and product hazard signs clearly posted
- \_\_\_ Dispenser hoses are no more than 18 feet long and do not reach within 5 feet of an important building when fully extended.

**Collision Protection/Site Security/Lighting**

- \_\_\_ Collision Protection
  - \_\_\_ Guard posts located not less than 5 feet from the tank. Must be at least 4 inches in diameter, at least 3 feet high, at least 3 feet deep in a 15-inch concrete footing, and no more than 4 feet apart. **(Must be located on any side subject to impact by a vehicle traveling on any surface accessible to the public.)**
  - Or
  - \_\_\_ Concrete secondary containment also used as impact prevention is at least 5 feet from tanks, is at least 3 feet high, and has a minimum of two 5/8-inch continuous reinforcement rods that are in the concrete and are located within 1 foot of the top of the structure.
  - Or
  - \_\_\_ Jersey barriers may be used as long as they meet DOT Specs. **(Must be located on any side subject to impact by a vehicle traveling on any surface accessible to the public.)**
  - Or
  - \_\_\_ Tank is built to UL-2085 specifications and manufacturer states that tank is impact resistant.
- \_\_\_ Site Security
  - \_\_\_ Tanks are surrounded with a chain link fence at least 6-feet high with three strand barb wire.
  - Or
  - \_\_\_ Tanks are surrounded with an alternative fencing due to restrictions by local authority. Description: \_\_\_\_\_
- \_\_\_ Tanks are well lit 24 hours a day (EPA requirement).

**NOTE: Tanks are not required to be enclosed with a fence if the property on which the tanks are located has a perimeter security fence.**

**Leak Detection and Spill Prevention Equipment**

**NOTE:** Use a "P" to indicate the primary method of leak detection.  
Use an "S" to indicate any other secondary method that is installed.

A. Tank Leak Detection Methods

- Visual inspection (horizontal tanks mounted on saddles or other supports).
- Inventory control (all tanks must use).
- Manual tank gauging (only acceptable for tanks that are 1,325 gallons or less).
- Statistical Inventory Reconciliation (SIR) - monthly monitoring.
- Interstitial monitoring (double-walled tank and required for all UL 2085 tanks).
  - Manual system utilizing gauge tube or stick.
  - Liquid sensors within the interstice that can be easily removed for testing or replacement.
- Automatic tank gauging capable of detecting 0.2 gph leak rate and is combined with inventory control. Readout checked to determine unit is connected and functioning properly.
- Electronic monitoring system.

ATG Model # \_\_\_\_\_, Brand Name or Manufacturer \_\_\_\_\_

ATG Serial # \_\_\_\_\_, Date \_\_\_\_\_

Installer: \_\_\_\_\_ Address: \_\_\_\_\_

- Attach printout of system check
- Clock gauge

B. Line Leak Detection Methods

Y/N Aboveground Lines

- Visual inspection

Y/N Underground Lines (must be non-corrodible and double-wall)

- Pressurized lines.
- Piping secondary held pressure after being covered.

\_\_\_\_ Piping boots loosened, air stem removed, or stem core removed, in order to allow secondary piping to convey product to transition sump or under dispenser containment pan where sump sensor is located (if piping interstitially monitored).

**NOTES: LLDs must be able to detect a leak of 3.0 gallons per hour at a line pressure of 10 psi within a period of 1 hour.**

**LLDs must be installed on all pressurized piping systems, including those with secondary containment.**

**All LLDs must be functionally checked at time of installation and once each year thereafter.**

**If mechanical LLDs are the only leak detectors used, perform line tightness testing.**

\_\_\_\_ Mechanical LLD (automatically restricts flow in the event of a leak)  
Additional line monitoring method (required for mechanical LLD)

\_\_\_\_ Tightness test.

\_\_\_\_ Testing performed by electronic LLD.

\_\_\_\_ Annual line tightness test.

\_\_\_\_ Statistical Inventory Reconciliation (SIR) - monthly monitoring.

\_\_\_\_ Vapor Monitoring.

\_\_\_\_ Sump Sensors.

\_\_\_\_ Sensors configured to detect a 3.0 gallon per hour leak.

\_\_\_\_ System disables pump (mandatory).

\_\_\_\_ Alarm connected to ATG.

\_\_\_\_ Alarm can be heard in employee occupied area.

\_\_\_\_ Alarm tested & functioning for all sensors? (Document on chart).

\_\_\_\_ Electronic LLD.

\_\_\_\_ Test conducted to demonstrate LLD is functional (document on chart below).

LLD DATA

TANK #	PRODUCT	TYPE	*MODEL #	MFG	SERIAL #	PASS/FAIL

Y/N This installation involves satellite (slave) lines and dispensers.

\_\_\_\_\_ If yes, acceptable leak detection method has been provided for slave lines (describe below).

\_\_\_\_\_ If mechanical LLDs are used, there are solenoids in the satellite (slave) dispensers (see LLD manufacturer's recommendations).

C. Overfill Protection and Spill Containment

**NOTE: NFPA 30 prohibits the use of ball float valves for overfill protection on aboveground tanks.**

\_\_\_\_\_ Overfill protection installed (It is mandatory to have both an alarm and a restriction device).

Brand: \_\_\_\_\_

Type: \_\_\_\_\_

\_\_\_\_\_ Flow shut off device (valve installed in fill pipe) set to stop flow completely when tank is 95% full.

\_\_\_\_\_ Alarm system with product level sensor set to alarm when tank is 90% of capacity (second alarm at 95% if tank is over 100K).

\_\_\_\_\_ Alarm provides audible or visual alarm to delivery person.

\_\_\_\_\_ Alarm located in close proximity to delivery area.

- \_\_\_\_\_ Alarm is clearly labeled so delivery person knows what alarm is for.
- \_\_\_\_\_ Each fill point is located within secondary containment.
- Or
- \_\_\_\_\_ Each fill point has its own means to contain spillage.
- \_\_\_\_\_ Normal tank vents are at least 1.25 inches inside diameter and are located so that vapors are released not less than 12 feet above adjacent ground level and not closer than 5 feet from any building opening or property line; all vents discharge upward and outward.
- \_\_\_\_\_ Emergency vents are properly installed and will allow vapors to escape during a fire without the tank rupturing from over pressure.
- \_\_\_\_\_ All tanks and the interstices of double-walled tanks are provided with emergency venting to prevent over-pressurization of the tank and interstice during a fire.
- \_\_\_\_\_ Emergency fuel shut off switches are located not less than 20 feet or no more than 100 feet from the dispenser area and are plainly labeled with 6-inch letters so as to be visible from the dispenser area.

D. Post Inspection Information

- \_\_\_\_\_ Completed tank notification form. Obtain signatures of owner and installer.

Tank Leak Detection (all ASTs are required to be monitored by inventory control; records are to be kept for at least 3 years).

- \_\_\_\_\_ Interstitial Monitoring. Must keep monthly liquid status printouts or log of monthly manual system checks.
- \_\_\_\_\_ Manual Tank Gauging (MTG) (tank capacity of 1,320 gallons or less).
- \_\_\_\_\_ Visual monitoring of tank bottoms. This may only be used if tank bottom is elevated and is monitored every month. A log showing each inspection date, name of the inspector, and what was discovered, shall be kept for at least 3 years.
- \_\_\_\_\_ ATG. Must pass a 0.2 gph test every month. One passing test printout must be kept for each tank for each month for the last 3 years.
- \_\_\_\_\_ Other approved method. \_\_\_\_\_

Line Leak Detection

- \_\_\_\_\_ Notified owner of requirement to function test line leak detector (LLD) or sump sensors each year (if applicable).
- \_\_\_\_\_ If mechanical LLDs are used, annual line tightness testing must be conducted or an alternative used (SIR, GW or Vapor Monitoring, or sump sensors)
- \_\_\_\_\_ Annual testing. Keep the last three test results.

Operator's Annual Inspection (OAI).

\_\_\_\_ Notified owner of OAI requirements.

COMMENTS:

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