

How to Prepare for an UST Compliance Inspection

Guidance for Owners and Operators of
Underground Storage Tank Facilities in Oregon



State of Oregon
Department of
Environmental
Quality

Land Quality Division

Underground Storage
Tank Compliance
Program

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**Do You Need a Copy of the UST Regulations?
OAR Chapter 340, Division 150**

Access our Web Page at:

<http://www.deq.state.or.us/wmc/tank/ust-lust.htm>

or

Call DEQ at:

1-800-742-7878 toll free in Oregon (message line)

or

(503) 229-5913

Important Note:

Review of Financial Responsibility records will be conducted separately from field inspections. You will be notified in writing when and where to submit the required information. The following publication from the U.S. Environmental Protection Agency (EPA) may be helpful:

“Dollars and Sense”

Financial Responsibility Requirements for Underground Storage Tanks

Do You Have Comments or Suggestions for Improving this Guidance?

Please let us know!

Send comments and suggested changes to:

Department of Environmental Quality
UST Program Policy Coordinator
811 SW Sixth Avenue
Portland, OR 97204

**Oregon Department of Environmental Quality
Underground Storage Tank Program**

HOW TO PREPARE FOR AN UST COMPLIANCE INSPECTION

PURPOSE

The purpose of this guidance is to assist underground storage tank (UST) owners and operators in preparing for a compliance inspection by Department of Environmental Quality (DEQ). Using this guidance will not only prepare you for an inspection, but may also help you ensure that your facility remains in compliance with UST requirements at all times.

\$300 FINES

INSPECTIONS SHOULD BE TAKEN VERY SERIOUSLY. BEGINNING THIS YEAR, DEQ INSPECTORS HAVE THE ABILITY TO ISSUE CITATIONS DIRECTLY TO YOU TOTALING \$300. IF MORE SERIOUS VIOLATIONS ARE DISCOVERED BY THE INSPECTOR YOU COULD BE ASSESSED CIVIL PENALTIES WHICH MAY COST YOU THOUSANDS OF DOLLARS.

GENERAL INFORMATION

The UST regulations are contained in Oregon Administrative Rule (OAR) Chapter 340, Division 150. Oregon has adopted federal Environmental Protection Agency (EPA) regulations (40 CFR Part 280) with some modifications. The "Permittee" is the person responsible for the day-to-day operation of Underground Storage Tank (UST) system. DEQ issues an UST General Permit Registration Certificate to a specific Permittee.

The Permittee is responsible for maintaining compliance with all state and federal rules and requirements associated with the installation, operation, maintenance and repair of an UST system. This is an important responsibility, as this work will help prevent leaks from occurring that can contaminate soil and groundwater. 70% of Oregon's citizens rely on groundwater as a primary or secondary source of drinking water. Failure to properly operate and maintain UST system equipment can result in the contamination of drinking water and the loss of a significant financial investment.

WHAT TO EXPECT DURING THE INSPECTION

At the time of your scheduled compliance inspection, you must be prepared to display, demonstrate and provide specifications for mechanical and structural UST components. You must also provide specific records, receipts and testing results that establish compliance with requirements for operation and maintenance of UST systems. You should have your equipment manuals on hand to refer to while operating the equipment. Please be aware that the inspector is there to review records and observe operation of equipment - the inspector will not operate the equipment or open containment covers for you.

You will also be asked to provide copies of records pertaining to release detection for tanks and piping, testing of any and all devices as required by rule, repairs and maintenance activities, and an as-built drawing of the UST system. If you have any doubt of your ability to meet the requirements of a thorough compliance inspection, DEQ recommends that you contact a licensed UST service provider or equipment vendor to assist you during the inspection. The Department expects you to make prior arrangement for any such assistance and to be fully prepared to complete the inspection on the date scheduled.

Compliance inspections may take as long as 4-6 hours at a large facility and will require your uninterrupted attention and assistance for the entire time. Access will be required into all UST system hatch covers, manways, sump covers and other entry points. You

should have all necessary authorization, keys and tools to provide access as required. Again, you must be able to open any covers or entry points, as part of a demonstration of your ability to operate all components. Advance planning, professional assistance and patience will help expedite the inspection process and avoid situations that may be disruptive to normal business operations.

HOW TO USE THIS GUIDANCE

Each Permittee is expected to be familiar with the UST system components and equipment at their facility as well as the UST regulations. With this knowledge, you can review this guide and determine the "Compliance Items" that apply to your facility. Compliance Items are specific requirements listed in state and federal rules that the DEQ inspector will be checking. This guide provides a listing of specific compliance items for new and existing UST systems, including release detection methods, spill prevention, overfill prevention, corrosion protection, and repairs.

Pages 3 through 7 are labeled A to J by section. All facilities are required to provide the information listed in Parts A, B, C, E, F, K, and L of this document. Facilities that utilize cathodic protection systems to prevent corrosion of metal UST components are required to provide the information listed in PART H. Facilities that have USTs that rely solely on internal lining to prevent leaks due to corrosion are required to provide the information in PART I. Facilities that have USTs that are not currently in use are required to provide the information in PART J. Depending on the release detection method(s) in use at your facility, you will need to complete one or more sections in Parts G.1 through G.8. Each section has been labeled to match the report form that DEQ inspectors use in the field, however, there is no Part D in this guidance.

TECHNICAL ASSISTANCE

After the inspection (or during, if appropriate), the UST inspector will be happy to answer any technical assistance questions you may have. In addition, each inspector carries copies of a number of guidance documents and regulations that they will be glad to provide you with.

AFTER THE INSPECTION

If you "pass" the inspection without any problems, DEQ will send you a brief letter to document your compliance status at the time of the inspection. You will also be notified if any violations are observed during the inspection and issued a "Notice of Noncompliance". The Notice will include specific actions that must be taken to correct the violations and a schedule for completing these actions. Once these corrections have been made, DEQ will send you a brief letter to document that compliance has been achieved.

We hope you find this guidance helpful.



Instructions to the Permittee:

Review the Compliance Items and required information listed in each PART that pertains to your facility. Check (✓) the box when you have assembled the required information or understand the requirement and can demonstrate compliance.

Part A Facility and Owner/Operator Information

Provide and/or verify the following information regarding property ownership, tank ownership and the person responsible for the day-to-day operation of the facility (Permittee).

Name, Address, telephone and Fax numbers for the:
Tank Owner, Property Owner and Permittee

Current information is available for all three and ready to be given to DEQ.

Part B Underground Storage Tank Information

Provide or verify facility information that includes: UST facility number and Operating Certificate number. For each tank: permit number (i.e. ABCD), your tank ID, product stored, tank diameter and length, volume, tank type, tank manufacturer, tank installation date, tank installer, corrosion protection installation date, internal lining installation date, temporary closure date, piping installation date, piping type, piping manufacturer, piping installer, if applicable.

Current information is available and ready to be given to DEQ.

Part C Facility Layout Diagram

Provide a detailed "as built" diagram of the entire facility. The diagram must include the location of all UST system components including all USTs, piping, dispensers, spill prevention devices, overfill prevention devices and all elements of any UST or piping corrosion control system.

As-built diagram is available and ready to be given to DEQ.

Part E Spill Prevention

Compliance Items

- Are spill devices required on all tanks?
- Is the fill pipe fitted with spill containment?
- Does the spill prevention device prevent spills during delivery?
- Is the turbine pump fitted with spill containment?
- Are the dispensers fitted with spill containment?
- Is there any visual sign of soil impacted by spills? If so, was the release reported to DEQ?

Part F Overfill Prevention

Compliance Items

- Are overfill devices required on all tanks?
- Do tanks have fill pipe shutoff devices?
- Do tank vents have ball float valves?
- Do tanks have high level alarms?
- If you have a fill pipe shut off device, does it stop product delivery at 95% of tank capacity or less?
- If you have a vent ball or alarm device, does it restrict or alarm at 90% of tank capacity or less?
- Have releases due to overfilling occurred?
- Have all overfill releases been reported?

Release Detection Methods

The release detection method used at your facility should be listed below. Use the key below to determine the PART (PART G.1 through PART G.8) that corresponds to the release detection method(s) for USTs and piping that are utilized at your facility, then refer to the applicable PART for a listing of Compliance Items for that method.

Method for USTs

- Automatic Tank Gauging - G.1
- Interstitial Monitoring - G.2
- Statistical Inventory Reconciliation (SIR) - G.3
- Inventory Control & TTT - G.3
- Manual Tank Gauging - G.4
- Manual Tank Gauging & TTT - G.4 & G.3 (#15 - #21)
- Groundwater Monitoring - G.5
- Vapor Monitoring - G.6

Methods for Pressurized Piping

- Interstitial Monitoring - G.7
- Automatic line leak Detector - G.7
- Annual Line Tightness Test - G.7
- Groundwater Monitoring - G.5
- Vapor Monitoring - G.6

Methods for Suction Piping

- Interstitial Monitoring - G.7
- Line Tightness Test (3yr) - G.7
- Groundwater Monitoring - G.5
- Vapor Monitoring - G.6
- None Needed - Safe Suction - G.8
- None needed - No underground piping

Part G.1 Automatic Tank Gauging (ATG)

Compliance Items

- What is the make and model of the ATG and sensing probe?
- Who installed the ATG and sensing probe?
- Is the ATG manufacturer's information available at site?
- Has the ATG been installed, calibrated and repaired as per the manufacturer's instructions?
- Has the ATG received third party verification of device performance? Have documentation available.
- Can the presence of tank probes be verified in each tank?
- Is the ATG control unit connected and operating?
- Is the tank test conducted at the required product volume and time?
- Are 12 months of test records available?
- Has the ATG ever indicated a release? If so, was the release reported to DEQ?

Part G.2 UST Interstitial Monitoring

Compliance Items

- Is monitoring performed manually or electronically?
- Is monthly monitoring performed?
- Are sensing devices 3rd-Party certified?
- Has equipment been installed, operated and maintained as per manufactures instructions?
- Can the equipment detect a leak from any portion of the UST that contains product?
- Is there a record of monthly monitoring conducted for each of the last 12 months?
- Have all suspected leaks been reported?

Part G.3 Inventory Control, Tightness Testing and Statistical Inventory Reconciliation

Compliance Items

- Are readings recorded each operating day and reconciled monthly?
- Is the correct calibration chart used to determine volume to the nearest 1/8 inch of product depth?
- Are tank inventory readings recorded before and after each delivery?
- Can gauge stick be read to nearest 1/8 inch and measure full height of product in tank?
- Are monthly water readings measured to the nearest 1/8 inch and used in the inventory calculation?
- Does each dispenser have a totalizer with a currently calibrated meter?

Statistical Inventory Reconciliation (SIR) only

Compliance Items

- Is monthly monitoring being performed?
- Has the SIR method received third party approval for tanks? Have documentation available.

Tightness Test only

Compliance Items

- Is tightness testing required as an element of Inventory Control?
- Have 5-year tightness testing been performed?
- Has the tightness test method been third party approved? Have documentation available.
- Did an Oregon licensed Service Provider for Tightness Testing perform the tightness test?
- Has the ten-year exemption from advanced leak detection expired?

All Methods

Compliance Items

- Are 12 months of monitoring data available?
- Is the monthly reconciliation calculation performed each month?
- Does the fill pipe drop tube extend to within one foot of the tank bottom?
- Did all tanks pass the last tightness test?
- Has a release or a suspected release ever occurred? If so, was the release reported to DEQ?

Part G.4 Manual Tank Gauging

Compliance Items

- Do records show that level measurements are taken at start and end of a 36-, 44- or 58-hour period?
- Is product added or removed during the gauging period?
- Are measurements recorded weekly?
- Is the monthly reconciliation calculation performed correctly?
- Is the tank inventory product height at the start and end of the gauging period the average of two stick readings?
- Is the weekly and monthly variation between start and end less than standard for tank size and test period?
- Can gauge stick be read in 1/8-inch increments to full height of tank volume?
- Is MTG the sole leak detection method for a tank with a volume of greater than 1,000 gallons?
- Is Tank Gauging and Tightness Testing the sole method for a tank greater than 2,000-gallon tank?
- Has the 10-year exemption from advanced leak detection expired?
- Has a tightness test been completed in the last 5 years?
- Are 12 months of monitoring records available?
- Has a suspected release occurred? If so, was the release reported to DEQ?

Part G.5 Groundwater Monitoring

Compliance Items

- Is the well registered with the Oregon Water Resources Department?
- Was the well installation approved by DEQ before it was installed? Have documentation available.
- Is the well log available and on file?
- Is the well clearly marked and secure?
- Can water be observed in the well?
- Is groundwater monitoring used as the release detection method for all USTs at this facility?
- Is groundwater monitoring used as the release detection method for all piping at this facility?
- Was a site assessment completed prior to installation of the groundwater monitoring wells?
- Is documentation of monthly monitoring available and on file?
- Is the specific gravity of the stored product less than 1.0?
- Is the hydraulic conductivity of the soil between the UST system and wells less than 0.01 cm/sec?
- Was the hydraulic conductivity determined by a registered geologist and is a report available?
- Is the groundwater more that 20 feet from the ground surface?
- Are the wells sealed from the ground surface to the top of the filter pack?
- Are the wells located within the UST excavation or as close as feasible?
- Does the screened interval intercept groundwater under both high and low water conditions?
- Can continuous or manual monitoring detect the presence of 1/8 inch of product on water?
- Is the groundwater monitored manually on a daily basis?
- Is the groundwater monitored continuously and are all system components present and operational?
- Does the well cause any increased risk to human health or the environment?
- Has a release ever been detected? If so, was the release reported to DEQ?

Part G.6 Vapor Monitoring

Compliance Items

- Was the well installation approved by DEQ before it was installed? Have documentation available.
- Is the well clearly marked and secure?
- Are the well caps tight?
- Is the well constructed to prevent interference by moisture?
- Is the well free of debris and has been recently checked?
- Was the UST excavation zone assessed prior to vapor monitoring system installation?
- Is the backfill material sufficiently porous?
- Is the stored product or tracer sufficiently volatile to be detected by the equipment used?
- Will rainfall, groundwater, soil moisture or other interference delay a 30-day detection time?
- Will background contamination interfere with the detection method?
- Will the vapor monitor detect any significant increase above background?
- Has a release ever been detected? If so, was the release reported to DEQ?

Automatic Systems

Compliance Items

- Is the control box accessible and the power on?
- Is documentation of continuous monitoring for last 12 months available?
- Is the monitoring equipment accessible and functional?
- Is the vapor sensor maintained and calibrated annually, as per manufacturer's instructions?

Manual Systems

Compliance Items

- Is documentation of daily monitoring available for the last 12 months?
- Is the monitoring equipment accessible and functional?
- Is the vapor sensor maintained and calibrated annually, as per manufacturer's instructions?

Part G.7 Pressure Piping Release Detection

Automatic Line Leak Detectors

Compliance Items

- What is the line leak detector make and model?
- Is the detector connected to an automatic shut off device?
- Is the detector connected to an automatic flow restrictor?
- Is the detector connected to a continuous audible or visual alarm?
- Did all mechanical detectors pass the last annual test?
- Is the detector 3rd-Party approved?
- Is the detector installed, operated and maintained as per the manufacturer's instructions?
- Do any of the detectors indicate a release? If so, was the release reported to DEQ?

Annual Line Tightness Testing

Compliance Items

- Is annual line tightness testing required as element of release detection?
- Is a conventional line tightness test performed?
- Is the tightness test 3rd-Party approved?
- Was the tightness test performed by an Oregon certified tester?
- Is an electronic tightness test performed?
- Is the electronic line leak detector 3rd-Party certified @ 0.1 gph?
- Has the electronic device been installed, operated and maintained as per manufacturer's instructions?
- Have all suspected releases been reported?

Daily Monitoring in lieu of Annual Line Tightness Test

Compliance Items

- Is daily "in pipe" daily monitoring performed?
- Is daily sump monitoring performed?
- Is daily groundwater monitoring performed?
- Is daily vapor monitoring performed?
- Can monitoring detect a leak in a portions of the piping that contains product?
- Is monitoring equipment 3rd-Party certified?
- Has monitoring equipment been installed, operated and maintained as per manufacturer's instructions?
- Is the daily monitoring method functional?
- Are 12 months of daily records available?
- Have all suspected releases been reported?

Part G.8 Safe Suction

Compliance Items

- Does the piping system slope to the tank and operate at atmospheric pressure?
- Is only one check valve used?
- Is the check valve located directly under the dispenser?
- How were these requirements verified? Have documentation available.
- Is a monthly monitoring method used?
- Is a line tightness test performed every 3 years?
- Is the tightness test 3rd-Party approved?
- Was the tightness test performed by an Oregon certified tester?
- Have all suspected releases been reported?

Part H Corrosion Protection

Steel Tanks and Steel Piping

Compliance Items

- Is the tank an “existing” steel tank?
- Is the tank a “new” steel tank?
- Does the tank have galvanic corrosion protection?
- Does the tank have impressed current corrosion protection?
- Is the piping “existing” steel piping?
- Is the piping “new” steel piping?
- Does the piping have galvanic corrosion protection?
- Does the piping have impressed current corrosion protection?

New and Existing Steel Tanks

Compliance Items

- Was an Integrity Assessment performed on all existing steel tanks with corrosion protection?
- Do all new tanks have a suitable dielectric coating?
- What is the date that corrosion protection was installed on this steel tank?
- Does each tank have a cathodic protection test station?
- Were all field-constructed cathodic protection systems designed by a cathodic protection expert?
- Does the cathodic protection system protect all metal part of the tank continuously?
- Was the 6-month cathodic protect inspection completed?
- What was the date of the 6-month inspection?
- Do you have records for the last two inspections?
- What is the date that the next inspection is due?
- Have inspections been performed by an accepted method?

Impressed Current Cathodic Protection for New and Existing Steel Tanks (only)

Compliance Items

- Is the impressed current system connected to electrical power and is it “on” at all times?
- Is the 60-day log present and kept current?
- Are 6 months of records available?

New and Existing Steel Piping

Compliance Items

- Do all new tanks have a suitable dielectric coating?
- What is the date that corrosion protection was installed on this steel piping?
- Does the piping have a cathodic protection test station?
- Were all field-constructed cathodic protection systems designed by a cathodic protection expert?
- Does the cathodic protection system protect all portions of metal piping continuously?
- Was the 6-month cathodic protect inspection completed?
- What was the date of the 6-month inspection?
- Do you have records for the last two inspections?
- What is the date that the next inspection is due?
- Have inspections been performed by an accepted method?

Impressed Current Cathodic Protection for New and Existing Steel Tanks (only)

Compliance Items

- Is the impressed current system connected to electrical power and is it “on” at all times?
- Is the 60-day log present and kept current?
- Are 6 months of records available?

Internally Lined Tanks (No C. P.)

Compliance Items

- On what date was the lining installed?
- Who was the lining installer?
- Was the lining installed by an approved method?
- On what date is the 10-year lining inspection due?
- Has the 10-year lining inspection been completed?
- Was the lining inspected by a method that is 3rd-Party approved?
- Did the tank pass the 10-year lining inspection?
- When is the next 5-year lining inspection due?
- Has the 5-year inspection been completed?
- Was the lining inspected by a method that is 3rd-Party approved?
- Did the tank pass the 5-year lining inspection?
- When is the next inspection due?

Part J Temporary Closure

Compliance Items

- Are any tanks currently not in use?
- On what date was use of the tank discontinued?
- Have any tanks been out of use longer than three months.
- If the tank has been closed more than three months has the system been capped and secured as required?
- Is there still product in any tank that is not currently used or is in temporary closure?
- Are all corrosion protection systems operating on closed tanks that contain product?
- Are corrosion protection systems operated and maintained as required?
- Are closed tanks with internal lining inspected as required?
- Is leak detection for piping performed as required?
- Is corrosion protection operated and maintained as required?

Part K Facility Upgrade and Repair History

The Permittee must notify DEQ prior to any upgrade work and document work performed. You must also keep records of any repairs made to system components and specifically list significant problems associated with equipment or materials.

- Current information is available and ready for DEQ to review.