



Maine Department of Environmental Protection

Underground Storage Tank Inspector

REFERENCE HANDBOOK June 2009 Edition

General Instructions

- A. State law and Department regulations require submittal of an inspection certifying all deficiencies have been corrected. The Department of Environmental Protection does not accept failing annual inspection results (except for failures due to inadequate daily inventory or failing cathodic protection results).
- B. Leak detection equipment and procedures, spill buckets, overfill prevention devices and Stage I vapor recovery equipment must be checked or tested annually for proper operation and performance. Cathodically protected tanks and piping must also be checked annually to insure they are adequately protected from corrosion.
- C. The UST Annual Inspection Report and Summary Report must be used to document the following activities: 1) Annual inspection and testing as described above, 2) Testing of replacement sensors, probes or other system components, and 3) Re-evaluation of the proper performance of leak detection procedures to update the results of an annual evaluation.
- D. All work associated with testing of equipment and checking of procedures must be performed under the direct, onsite supervision of a Maine certified underground storage tank installer or a Maine certified underground storage tank inspector. Testing must be done in accordance with manufacturer's instructions and the instructions below.
- E. Annual Inspections are required to be conducted every twelve (12) months. The tank owner is responsible for assuring a copy of the passing UST Inspection report and Summary report is submitted to MeDEP within thirty (30) days after the inspection is completed. An Annual inspection is not completed until all items are passing. Completed UST Annual Inspection Reports and Summary Reports should be mailed to Annual Tank Inspections, Maine Department of Environmental Protection, 28 Tyson Drive, 17 State House Station, Augusta, ME 04333. The facility owner must keep a copy for their facility records. The MeDEP strongly recommends the tank inspector also keep a copy for their records. As a courtesy, the tank inspector may send a copy of the report to the Department.

Inspection Summary

- A. You must complete the appropriate sections of the Annual Inspection report before you can complete the Inspection Summary Report.
- B. At the top of the page, print the facility name, location (city or town), owner, operator, MeDEP registration number and the telephone number of the owner.



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- C. Fill in the tank and chamber # for each tank you inspect as they are identified in the MeDEP's registration information. For compartmented tanks, list each compartment separately (i.e. 7-1, 7-2). Use an additional sheet if you inspect more than four (4) tanks or chambers at a facility. If you are unsure of the tank number or chamber number, check the facility Registration Certificate on site or contact the Department. Registration information can also be found on the Department's website later this year.
- D. Indicate the volume and product stored in each tank or chamber.
- E. For every row, check the appropriate box to indicate whether each tank Passed or Failed. If the tank is not required to use that method of leak detection, spill or overfill prevention, Stage I vapor recovery or cathodic protection then check N/A – Not Applicable.
- F. For each tank check Pass or Fail at the bottom of the column. If the tank fails any of the inspections listed above then check Fail.
- G. There are two signature lines. The inspector must sign and date the first signature line of the Summary report after completing the inspection. If the facility passes or all deficiencies (failures) have been corrected the inspector must sign and date the second signature line of the Summary report. The second signature line cannot be filled out until all deficiencies have been repaired.

What if the facility FAILS the inspection?

Department regulations require prompt repair or replacement of leak detection, spill and overfill prevention equipment.

Underground Storage Tank (UST) facilities are required to submit a passing annual inspection to the Department every year. There is no need to submit failing annual inspections results, except for no daily inventory when the inventory is submitted by the owner or failing cathodic protection results on the tank or piping. Items that are failing must be repaired within thirty (30) days or the owner must notify the Department. In certain situations more time may be given to make repairs.

Passing inspection reports must be submitted to DEP within thirty (30) days after the inspection is completed.

A facility owner can also certify that certain deficiencies were corrected including daily inventory, a missing or worn gauge stick, replacement of the paper roll in an ATG console (print out a report and staple it to the form to show the system is functioning properly), replacement or installation of a monitoring well bailer, cleaning out spill buckets, replacement of spill bucket lids and, on out-of-service tanks, installation of a lock on the fill, replacement of covers on fills, manways, interstitial risers and dispensers and removal and proper disposal of tank contents. See <http://www.maine.gov/dep/rwm/ust/pdf/failingaiownerins.pdf>.



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UST Annual Inspection Report

- A. This section includes instructions for inspecting each of the systems listed in the Annual Inspection Summary Report.
- B. For each tank you will need to inspect the primary leak detection system – Daily Inventory, Automatic Tank Gauging, Interstitial Monitoring or Groundwater Monitoring. Only onsite heating oil tanks with capacities less than 1100 gallons, installed before September 16, 1991, will not have a primary leak detection system. The facility registration certificate will indicate what method of leak detection is registered with the MeDEP. If you are unsure of what the registered method of leak detection is please contact the MeDEP and ask to speak with someone in the Underground Oil Storage Tanks Program at (207) 287-2651, or visit the Departments website later this year.
- C. Some tanks may have more than one leak detection system in place. At minimum, inspect the one the owner is using to meet MeDEP leak detection requirements.
- D. Piping leak detection, spill prevention and overflow prevention systems, Stage I vapor recovery and crash valves should also be inspected. Check subsequent sections of this Handbook for each one to determine whether the tank is required to have that system in place.
- E. Use an “X” or a “✓” in the appropriate column to indicate whether the answer is Pass or Fail for each applicable question. If there are more than four (4) active tanks at a location, use additional pages.
- F. Only the UST Annual Inspection Report pages you have completed need to be submitted.
- G. Questions are numbered in order. If you need more information about a particular question call 1-800-452-1942 or (207) 287-2651 and ask to speak to someone in the Underground Tanks Unit.

Daily Inventory

The following tanks must use Daily Inventory for leak detection if they are motor fuel or marketing and distribution tanks.

- A. Single-walled tanks installed before September 16, 1991 and protected against corrosion without an alternative leak detection method installed and registered with the Department.
- B. Double-walled tanks installed before September 16, 1991 without electronic interstitial monitoring. (The tank interstitial space must also be monitored manually)



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- C. Double-walled electronically monitored tanks with single-walled pressurized piping with mechanical LLD installed before September 16, 1991 (piping only). Remember to also inspect the electronic monitoring system for the tank.
- D. Double-walled electronically monitored tanks with suction piping that is not properly sloped (piping only) and installed before September 16, 1991. If it was installed after 1991 the piping was not properly installed. Remember to also inspect the electronic monitoring system for the tank.

Tank owners or operators using daily inventory are required to collect inventory data every day product is added to or removed from the tank.

To calculate daily inventory, the owner/operator must read each totalizer, measure the product and water level in each tank and keep a record of deliveries to the tank (gallons and date). Each day the owner/operator must calculate how much they are over or short.

At the end of each month the owner/operator must perform a monthly leak check by comparing the monthly inventory overage or shortfall to the total monthly throughput. See the Appendix for an example of daily inventory data and monthly leak check.

If the monthly overage or shortfall exceeds 1% of throughput, that is evidence of a possible leak and must be reported to the Department within 24 hours. The easiest way to do this is to fax a copy of the results to MeDEP at (207) 287-7826. (Be sure the station name, address and registration number are on the inventory so we can identify the facility.)

You will need to see a copy of the previous month's inventory in order to do your inspection. For example, if you inspect a station in July, you will need a copy of June's inventory record for detailed analysis, although three (3) years of inventory is required to be kept by the owner or operator and made available to MeDEP upon request.

1. Check to see if the owner did a monthly leak check for the previous month.

To do a monthly leak check, the owner must total the gallons pumped for each tank (or tank system if two or more tanks are manifolded together) for the month and compare this number to the cumulative overage or shortfall for the month.

2. If the monthly cumulative overage or shortfall exceeds 1% of throughput, this is evidence of a possible leak and must be reported to the Department.
3. Check to make sure there is a drop tube installed in the fill. If daily inventory is used for leak detection there must be a drop tube installed in the fill, regardless of the type of fuel stored.

If product level is determined manually



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4. Check the gauge stick to make sure the markings are in 1/8th inch increments and legible for the entire length.

Make sure it is not bent, broken or cracked, the end is not worn and the plastic button is still in place on the bottom.

If product level is determined using an Automatic Tank Gauge (ATG)

Check to make sure the monitoring console is present and working properly. The indicator lights and horn must be working and if the console is equipped with a printer, it must be in working order.

Check the water sensor following the instructions under ATG (instruction 8 below).

Check the product sensor following the instructions under ATG (instruction 9 below)

Verify the ATG system inventory is the same as actual stick inventory.

Complete any other periodic inspection per the manufacturer's instructions.

Automatic Tank Gauging (ATG)

The Department defines an ATG as a console and associated probe(s) which monitor for leaks in a single-walled tank. Some companies describe the multi-use console as an ATG but that is not the Department's definition.

An ATG may not be used as the primary leak detection method on a waste oil tank without written permission from the ATG manufacturer on file with the Department.

You will need to inspect the in-tank test results, and possibly the product inventory records, for the thirty (30) days before your inspection to confirm if a facility is in compliance. MeDEP regulations require the ATG perform a passing 0.2 gph test at least once every thirty (30) days. The owner must keep three (3) years of test records on-site or available on short notice.

Testing must be conducted at a tank capacity or a range of tank capacities as specified in the equipment manufacturer's instructions.

Required: Attach copy of ATG printout showing passing results with the inspection report. If ATG printout results are not included with annual inspection report, the inspection will be considered incomplete and returned to the owner.

Important: If the Facility Registration Certificate indicates that the leak detection method is Daily Inventory & Statistical Inventory Analysis (SIA) or Groundwater Monitoring, be sure to fill out the corresponding section. If the owner is using an ATG as the tanks primary leak detection and the Certificate indicates something different, then the Department must be notified so the record can be updated. When changing the leak detection method to an ATG,



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the facility owner must submit an ATG registration form with a copy of the set up report for each tank using an ATG. **The ATG may not be used in lieu of other leak detection until these documents are submitted.** See

<http://www.maine.gov/dep/rwm/ust/atgrequirements.doc>.

Important: If a tank has single-walled pressurized piping it must also have an electronic line leak detector that tests for a 0.2 gph leak at least once every thirty (30) days or continue to perform daily inventory and SIAs. Please see the section covering Line Leak Detection for requirements.

5. Enter the make and model number of the ATG and the test method in the space at the top of the section.
6. Check to make sure the monitoring console is present and working properly. The indicator lights and horn must be working and if the console is equipped with a printer, it must be in working order.
7. Check to make sure a 0.2 gph test was run in the last thirty (30) days at a capacity or a range of tank capacities as specified in the equipment manufacturer's instructions.

To confirm the ATG probe is functioning properly:

8. Water sensor check
 - A. Remove the ATG probe from the tank and place it carefully on the ground.
 - B. Place the water sensor float flush with the bottom of the probe shaft and the product float near the middle of the probe shaft.
 - C. Move the water float up to a point higher than the high water alarm set point. The monitor must respond with a high water alarm report.
9. Product level sensor check
 - A. Check the product height reading on the monitor (allow enough time for the monitor to respond).
 - B. Measure the distance from the bottom of the probe to the bottom of the product float and make sure it matches the reading on the monitor.
 - C. Reinstall the probe in the tank and take an initial fuel level reading.
 - D. Dispense 3-5 gallons of gas. Take a second fuel level reading and verify the change is the same as the amount dispensed.



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Complete any other periodic inspection actions required by the manufacturer's instructions (e.g., check battery function, print out & review console set-up).

Groundwater Monitoring

Groundwater monitoring wells are installed in the backfill around a tank to monitor the groundwater for the presence of oil.

They may only be used to monitor for leaks from single-walled consumptive use heating oil tanks installed before September 16, 1991 and only if no other leak detection method is available.

Department regulations do **not** allow monitoring wells to be used as the primary leak detection method for double-walled tanks or for motor fuel tanks, marketing and distribution tanks or waste oil tanks.

10. Check to make sure the monitoring well riser is accessible. Make sure the lid has not been cemented or paved over.
11. Check to make sure monitoring wells are clearly marked and properly secured. The industry standard for marking a monitoring well is a black triangle on a white background. The well must be distinguished from a fill cover and the riser must have a liquid-proof cap.
12. Check to make sure there is a bailer to sample the well and that it is clean and operational. It should be clear enough to determine if there is floating product on the water sample inside. (Since disposable bailers are relatively cheap, it is helpful to keep some with you to supply sites where the bailer is lost, broken or dirty. Keep these replacement bailers in a clean location in your truck).
13. Make sure there is water in the bottom of the well. If there is no water or not enough to bail then the system is not in compliance.
14. Bail a sample of water from the well and make sure there is no floating product or smell of oil. If there is floating oil or the smell of oil then the system fails (**Note:** floating oil or a smell of oil is evidence of a possible leak and must be reported to the Department within 24 hours).
15. Check to make sure the owner/operator has kept a weekly written log of the monitoring well inspections (see Appendix for an example log sheet). There should be at least one month's records available with weekly entries.

Interstitial Monitoring (tank and piping)



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Fill out this section for each facility where any part of the facility is secondarily contained.

Please note: Dispenser interstitial monitoring section is on page 8.

Only double-walled tanks or double-walled piping installed prior to September 16, 1991 may use manual monitoring as part of the leak detection system (if electronic monitoring was not installed).

If manual monitoring is used on tanks where throughput is metered, the owner/operator must also keep daily inventory and perform an annual SIA.

16. If the interstitial monitoring system is electronic, enter the make and model number of the system in the space at the top of the section.
17. Indicate whether the monitoring system is electronic (E) or manual (M). Enter an X if either the tank or the piping uses another system of monitoring.

Please note: Dispenser probes are now listed in the **Dispenser and Crash Valve** section, numbered 63 – 68.

For Manual Monitoring

18. The interstitial monitoring sump should be accessible to allow the owner or operator to check weekly for the presence of oil and water. If the access cover is cemented shut or the cap to the interstitial space is rusted on and you cannot gain access before you leave then the system fails. There should be a removable cap to keep dirt and water from entering the interstice.
19. The owner/operator must keep a written log of the results of weekly monitoring of the interstitial space. See Appendix for an example. There should be at least one month's worth of weekly entries available for your review and three (3) years worth of entries available should MeDEP request it.

For Electronic Systems:

20. The monitoring console must be fully operational including horn, lights and printer (if it has one). Explain any problems in the Comments section.
21. Sensors must be properly placed.

For dry interstice tanks, check to make sure the probe is located at the bottom of the tank interstice.

For fiberglass tanks, this will mean using a string and following the manufacturer's instructions to assure the probe is properly located. If there is not a string installed in



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the interstice when you do an inspection, one must be installed to assure the probe is at the bottom of the tank.

For brine solution tanks, check both the high and low level alarms.

For piping sump probes, the sensor must be installed according to the manufacturer's requirements and as close to the bottom of the sump as possible.

22. All sensors must be individually tested for proper operation. Follow the manufacturer's instructions.

The interstitial sensor must be removed from the tank and tested for proper operation. Piping sump probes usually must be removed from the sump. Nondiscriminating float sensors can be turned upside down or can be immersed in water to test. Nondiscriminating optical sensors should be immersed in water to test. Discriminating sensors may need to be exposed to product in order to activate the alarm.

Abuse of a probe to create an alarm is not allowed.

Pressing the test button on the console is not sufficient to confirm proper operation of the probe.

The system must alarm when the probe is exposed to liquid.

For All Systems:

23. Check to see if the piping sump is liquid tight. A tightness test is not required but if the sump has an obvious hole or crack, penetration boots are not properly in place, significant water is present, or the sump cover is damaged, indicate **FAIL**. Additionally, be sure that test boot(s)/donuts are in proper position to allow double wall piping to properly function.
24. Check the piping sumps and tank interstice for oil. This includes the tank interstitial space and the piping sump.

Oil in any sump is evidence of a possible leak and it must be reported directly to the Department.

For piping and dispenser sumps, if you remove the oil and repair the leak before leaving the site, a passing result can be recorded. Remember, you may repair submersible pumps only if you are certified by the pump manufacturer to work on their systems.

Always record oil in the tank interstice as a failing result and report it directly to the Department.

Note any repairs you make to correct or prevent further leaks.



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25. Check the piping sumps and tank interstice for water. This includes the tank interstitial space and the piping sump.

Water in any sump is evidence of a possible leak. It must be reported to the Department.

If you remove the water before you leave the site, a passing result may be recorded. Otherwise a failing result must be recorded.

Note any repairs you make to prevent further leaks.

Overfill Prevention

Overfill prevention is required on all underground tanks installed after September 16, 1991. The exception is consumptive use heating oil and process oil tanks smaller than 1101 gallons.

Motor fuel tanks, marketing and distribution tanks and waste oil tanks are all required to have overfill prevention, regardless of when they were installed.

Note: The Oil and Solid Fuel Board rules require a vent alarm on all #1 and #2 heating oil tanks under 5000 gallons.

26. Enter the type of overfill prevention - Ball float (B), Auto shut off/flapper (F), Electronic high level alarm (E), or Vent whistle (V). If the tank does not have and is not required to have overfill protection enter X in this space.

If the tank is required to have overfill protection and none was installed or there is no access for inspection, enter X in this space and check FAIL at the bottom of the column. Explain in Comments section.

Ball float

These devices can only be used on tanks that receive gravity drop deliveries. After December 24, 1996 Department regulations prohibit the installation of ball floats on tanks served by a suction pump system. Ball floats installed on suction systems **may not be repaired**. If the ball float fails, it must be replaced with a different type of overfill prevention device.

27. The ball/float device must be accessible for inspection. Remove the ball float and make sure the ball is present and moves easily in the cage. Make sure the ball has not cracked and filled with product.
28. Check to make sure the ball seats when the tank is 90% full or less. (Remember to take into account the height of any manway the ball float is screwed into, as well as the thickness of a double-walled fiberglass tank that the ball float is used for when determining whether or not the ball seats at the proper height.)



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Auto shutoff/Flapper

These devices are used on tanks that receive drop tight fill deliveries. They are installed in the fill riser. Consult manufacturer's instructions for any specialized testing instructions.

29. The Flapper must be accessible for inspection. Remove the device from the fill riser and check to make sure it is in working order and no parts are damaged or missing.
30. Check to make sure the device closes when the tank is 95% full or less.

Electronic High Level Alarm

These devices may be used regardless of the type of delivery to the tank. A probe is installed in the tank to monitor product level. A horn sounds to warn the delivery driver before the tank is overfilled.

31. The in-tank probe must be accessible for inspection.

Remove the probe from the tank and place it carefully on the ground. Slide the product float up slowly until the high level alarm sounds. Check to make sure the probe slides easily along the shaft.

Check to make sure the horn is clearly audible to someone standing at the fill.

32. Measure the distance from the bottom of the probe to the bottom of the product float. Check to make sure the system alarmed when the probe float was at 90% full or less.

Vent whistle

These devices may only be used on consumptive use heating oil tanks receiving pump off, tight fill deliveries.

33. Check to make sure the whistle is working properly.
34. Check to make sure the vent whistle has been installed so the whistle will stop when the tank is 90% full or less.
35. Check to make sure the vent pipe outlet is within eight feet (8') of the fill.

Spill Buckets

Department regulations require spill buckets on all motor fuel, waste oil and marketing and distribution tanks.



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Consumptive use heating oil tanks smaller than 1101 gallons are not required to have spill buckets.

Consumptive use heating oil tanks installed before September 16, 1991 that are 1,100 gallons or greater and that have monitoring wells must either have a spill bucket with a capacity of three (3) gallons or greater, or an overfill prevention device.

If a facility has a spill bucket it must be inspected and maintained.

Enter the Tank #'s only for tanks or chambers required to have spill buckets and tanks and chambers with spill buckets.

36. Check to see if a chamber has spill buckets.
37. Check to see if the spill buckets are empty – no dirt, salt, water or fuel. If the spill bucket is not emptied before you leave the site then enter fail here.
38. Check to see if the bucket is liquid tight. A tightness test is not required but indicate fail if the bucket is obviously rusted out or split open or if the drain-back valve has rusted out.
39. Check to see that the lid is not missing, split or chipped. If the lid is missing or there is a chip or split large enough to create an opening into the bucket when the lid is in place, then indicate FAIL.
40. Check to make sure that the lid is not touching the fill cap. (**Note:** Flipping the lid is a temporary solution to prevent damage to the tank. The problem must be permanently corrected before the system can PASS.)

Line Leak Detectors (LLD)

Line leak detectors (LLD'S) are used to continuously monitor pressurized piping systems for catastrophic leaks.

Any product piping systems supplied by a submersible pump must have a line leak detector that signals the pump to either shut down or switch to slow flow if a leak is detected in the piping system.

41. Enter the make and model number of the Line Leak Detector in the space at the top of the section.
42. Indicate whether the LLD system is mechanical (M) or electronic (E). If one or more of the tanks is not required to have an LLD, enter not applicable (N/A) for those tanks.
43. Check to make sure a line leak detector is present.



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44. Check to make sure the LLD is listed for use with the type of piping installed (flexible or rigid).

For Mechanical LLD's

45. Follow the manufacturer's instructions for simulating a three (3) gph @ 10 psi leak in the piping system.

For mechanical devices, the test protocol and testing equipment is essentially the same for the various manufacturers.

LLD's that fail to detect and respond properly to a three (3) gph leak and cannot be replaced or repaired before you leave the site must receive failing results. Note in comments if you have to replace the LLD. All mechanical LLD's signal a leak by restricting the flow at the nozzle to about three (3) gallons per minute.

For Electronic LLD's

46. Check system settings to make sure the settings are correct including pipe type (rigid or flexible), pipe length and leak rate (3 gph? 0.1 gph?).
47. Check to make sure the system shuts down the turbine or alarms when a leak is simulated. For test methods and equipment for electronic LLD's, see the manufacturer's instructions for specific test requirements.

LLD's that fail to detect and respond properly to a leak simulation and cannot be replaced or repaired before you leave the site must receive failing results. Electronic LLD's signal a leak by shutting off power to the pump and/or sounding an alarm.

For tanks with ATG's only

MeDEP regulations require that a tank using an ATG for leak detection and equipped with pressurized single-walled piping, must have an electronic LLD that performs a 0.2 gph leak test at least once a month.

Check the test history to confirm the most recent test was passing and was done within the last thirty (30) days.

Piping on Heating Oil Tanks

48. Copper piping on heating oil tanks is required to be sleeved in all instances where it was installed prior to September 16, 1991. Piping installed after September 16, 1991 must be secondarily contained and continuously electronically monitored to detect leaks.



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49. In systems that have SUCTION and RETURN lines in the same sleeve or secondary containment installed after September 16, 1991, the lines must be isolated from each other by spacers to prevent wear from vibration and friction.

Stage I Vapor Recovery

Stage I vapor recovery systems are required for gasoline tanks where the monthly gasoline throughput has ever exceeded 10,000 gallons. Only a few facilities, such as small convenience stores, seasonal businesses and small trucking companies, do not meet the 10,000 gallon cut off.

50. Fill in what the gasoline throughput was for the last calendar year and fill in the year.
51. Indicate what type of Stage I Vapor Recovery system is in place – Two Point/Manifold (M) or Coaxial (C).

For Two Point/Manifold Systems

52. Check to make sure the vapor recovery poppet cap and cap gasket are in place and in working order.
53. Check the vapor recovery poppet by depressing the spring loaded center. The poppet should return to its normal position making a tight seal with the poppet housing.

Missing, dented or cracked poppet gaskets are not acceptable.

54. Check to make sure the manhole cover over the vapor recovery pipe is in good condition. Chipped, cracked or missing covers must be replaced.

For Coaxial Systems

55. Check to make sure the top of the fill risers are in good condition. The top rim of the drop tube should be smooth, with no dents or significant damage. The drop tube should be centered in the fill pipe, so that there is a clear vapor path all the way around between the drop tube and the fill adapter.

For All Systems

56. Check to make sure the fill pipe cap and gasket are present and in working order.
57. Check to make sure there is a drop tube in place.
58. Check to make sure the long side of the drop tube ends within 6 inches of the bottom of the tank.



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Dispenser and Crash Valves Area

A crash valve must be installed on pressurized pipelines serving product dispensers.

There is space for seven (7) different dispensers. If there are more than seven (7) dispensers, please use additional "Dispenser and Crash Valve Area" forms.

At each dispenser answer the following questions:

59. Check to make sure the crash valve is installed at the proper height. The shear valve groove must be level with or a maximum of one half inch ($\frac{1}{2}$ ") above or below the top of the dispenser island.
60. Check to make sure the valve is rigidly secured to the island form.
61. Check to make sure the valve can be easily opened and closed by hand.

The valve should be opened and closed several times by hand to assure no gum-deposits or other conditions impair operation of the valve (Caution: Shut off the pumping system before performing this test. Do not open the valve while piping is under pressure.)

62. Check for weeps or leaks at each dispenser. An active weep or leak that is not repaired **FAILS**.

For Electronic Systems:

63. The monitoring console must be fully operational including horn, lights and printer (if it has one). Explain any problems in the Comments section.
64. Sensors must be properly placed.

For dispenser sump probes, the sensor must be installed according to the manufacturer's requirements and as close to the bottom of the sump as possible.

65. All sensors must be individually tested for proper operation. Follow the manufacturer's instructions.

Dispenser sump probes usually must be removed from the sump. Nondiscriminating float sensors can be turned upside down or can be immersed in water to test. Nondiscriminating optical sensors should be immersed in water to test. Discriminating sensors may need to be exposed to product in order to activate the alarm.

Abuse of a probe to create an alarm is not allowed.



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Pressing the test button on the console is not sufficient to confirm proper operation of the probe.

The system must alarm when the probe is exposed to liquid.

For All Systems:

66. Check to see if the dispenser sump is liquid tight. A tightness test is not required but if the sump has an obvious hole or crack, penetration boots are not properly in place, or significant water is present, indicate **FAIL**. Additionally, be sure that test boot(s)/donuts are in proper position to allow double wall piping to properly function.

67. Check the dispenser sumps for oil.

Oil in any sump is evidence of a possible leak and it must be reported to the Department directly.

For dispenser sumps, if you remove the oil and repair the leak before leaving the site, a passing result can be recorded.

Note any repairs you make to correct or prevent further leaks.

68. Check the dispenser sumps for water.

Water in any sump is evidence of a possible leak and it must be reported to the Department directly.

If you remove the water before you leave the site, a passing result may be recorded. Otherwise a failing result must be recorded.

Note any repairs you make to prevent further leaks.

ATTENTION: Be sure that you record in the Comments section below the product type for each line that does not pass the three (3) questions above. You will need this information to fill out the summary sheet.

Corrosion Protection (Galvanic and Impressed Current systems)

Department regulations require cathodically protected tanks and piping be checked every year to make sure they are adequately protected from corrosion.

These checks must be performed by a Maine certified underground tank installer or a Maine certified underground storage tank inspector that has also been certified by Board of Underground Storage Tank Installers as a cathodic protection tester.



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There are two systems of cathodic protection – galvanic and impressed current. The inspection requirements are different for the two systems. Galvanic systems are the most common type, representing over 99% of the cathodic protection systems.

For **Galvanic Systems** do the following:

69. Enter the readings in the top spaces provided.

Follow the instructions given in the Rules for Underground Oil Storage Facilities, Chapter 691, Appendix A and perform a structure to soil potential reading for each tank and each piping run that is cathodically protected. The Rules for Underground Oil Storage Facilities, Chapter 691 require a minimum of three (3) readings for each single wall tank, one at each end and one at the midpoint.

Remember the electrode must be in direct contact with clean soil. The readings must be taken over the center line of each tank and piping run.

Wet soil provides better readings. Readings cannot be accurately taken in frozen ground.

Readings less than -0.85V are failing.

The person taking the readings must sign the Cathodic Protection section certifying that they performed the inspection for this section in accordance with nationally accepted standards and also certify that they are a properly certified Maine underground oil storage tank installer or a properly certified Maine underground oil storage tank inspector that has also been certified by the Board of Underground Storage Tank Installers as a cathodic protection tester.

70. Indicate whether the readings are passing or failing in the space below.

For **Impressed Current Systems** perform the following:

71. Verify that the rectifier has power and is turned on.

If the system is NOT an Impressed Current System please mark the form where indicated as N/A.

72. Verify that the facility is performing monthly inspections of the rectifier that involve reading and recording voltage and/or amperage readings. A written log of these inspections must be maintained. Rectifier voltage and/or amperage outputs are compared to the recommended operating levels that were determined during system installation.

To test an **Impressed Current System**, follow the test methods and criteria as described in the National Association of Corrosion Engineers (NACE) TM 0101-2001,



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“Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,” or TM 0497-2002, “Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems.”

Temporarily Out of Service Tanks

Even if product is not being added to or removed from a tank it must be properly maintained.

If the tank and/or piping is cathodically protected, it must be checked yearly to make sure it is still protected from corrosion.

If the tank contains more than one inch of product then leak detection systems must be maintained and checked yearly. Daily Inventory cannot be done on a system where product is not being pumped.

Underground oil storage facilities and tanks that have been out of service for a period of more than 12 months may not be brought back into service without the written approval of the commissioner. A tank owner may apply in writing for approval of the commissioner to allow a facility to remain temporarily out-of-service for more than 12 consecutive months, if done so before the initial 12 months out-of-service expires. The commissioner may approve the return to service if the owner demonstrates to the commissioner's satisfaction that the facility meets the criteria of Maine's *Underground Oil Storage Facilities and Groundwater Protection Law*, 38 M.R.S.A. § 566-A(1-A).

NOTE: For additional conditions, see the Rules for Underground Oil Storage Tank Facilities, Chapter 691.

73. Enter the date the tank system was taken out of service. If you are not sure of the exact date explain in the comments section.
74. Does the tank have less than one inch (1") of product, water, or residual? (If the tank contains more than one inch (1") of product, water, or residual then leak detection systems must be maintained. Remember to fill out the appropriate section of the inspection form for the tank leak detection system.)

For tanks that are or will be out of service more than three (3) months check the following.

75. Check to make sure the tank is properly vented.

An open vent is required for safety reasons and to prevent damage to the tank.

76. Check to make sure the fill cap is locked.

A locked fill prevents delivery errors and dumping of hazardous waste. It also prevents rainwater from entering the tank by this route.



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77. Check to make sure the product piping has been disconnected and capped and the dispensers and manways are secure. (**Note:** For seasonal tanks, the product piping does not have to be disconnected and capped).

Dispenser covers, manway covers and lids must be in place.

A FACILITY MUST BE TESTED as directed by the Department BEFORE IT CAN BE PLACED BACK INTO SERVICE.

After completing the appropriate section of the Inspection Report, fill out the Inspection Summary Report (Page 1). Sign and date the Summary form at the bottom.

THE END

Appendix

CONTENTS

- 1. Daily Inventory/Monthly Fuel Log**
- 2. Interstitial Monitoring Log**
- 3. Monitoring Well Log**
- 4. Monthly Gasoline Throughput Log**

KEEP THIS COMPLETED FORM FOR AT LEAST THREE YEARS ON SITE

MONTHLY FUEL REPORT / DAILY INVENTORY

Month/ Year _____

Facility & Location . _____ :Registration Number: _____

Tank Size and Fuel Type: _____ Certified By: _____

Date	Opening Inventory (Book Inventory of Previous Day)	Gallons Pumped	Gallons Delivered	Book Inventory Balance	Closing Stick Inventory	Cumulative Over or <Short>	Inches Water	Initials
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
Math Check		-	+	=				

Leak Check: Sum of Gallons pumped (_____) x .01 = _____
 IF SUM OF "CUMULATIVE OVER OR SHORT" IS GREATER THAN LEAK CHECK RESULT IT IS CONSIDERED
 EVIDENCE OFA POSSIBLE LEAK AND YOU MUST NOTIFY DEP AT (207) 287-2651

MONTHLY GASOLINE THROUGHPUT LOG

Facility: _____ Registration #: _____

Location: _____

Gallons Pumped From Each Tank						
20__	Tank #	Tank #	Tank #	Tank #	Tank #	Monthly Total
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
Total Yearly Volume: _____						
Instructions for Monthly Gasoline Throughput Log Sheet						
<p>Department of Environmental Protection Regulation 118 “Gasoline Service Station Vapor Control”, administered by the Bureau of Air Quality Control, requires all gasoline dispensing facilities to keep records of the amount of gasoline that is dispensed each month. These records must be available for inspection and copies provided to Department staff upon request.</p> <p>To calculate the monthly volume of gasoline dispensed at the Station, fill in the sum of the Gallons Pumped from the Monthly Fuel Report/Daily Inventory for each gasoline tank for the appropriate month. Add the monthly gallons pumped for all gasoline tanks at the station and place the sum in the Monthly Total box. At the end of the year, add the monthly totals and place the sum in the Annual Total box. Do not include volume of diesel fuel, K-1 or any fuel dispensed other than gasoline on this sheet.</p> <p>Some vapor control is required at stations with an annual throughput greater than 100,000 gallons. See the regulation for details or contact MeDEP/Air Bureau office in Augusta, Bangor, Portland, or Presque Isle.</p>						