

ABOVEGROUND STORAGE TANKS (ASTs)

ASTs that contain petroleum products often have underground product piping connected to them. These underground piping systems present all of the same problems with leakage as underground piping connected to underground storage tanks (USTs), but until 1991, underground piping connected to ASTs was subject to very few rules. Since 1991, Maine has been increasing the regulatory requirements associated with underground piping connected to ASTs. By 2011, this piping will be meeting the same requirements as underground piping connected to USTs.

Maine DEP has proposed regulations that would include operators of ASTs with underground piping in the *TankSmart* UST operator certification program. For current information concerning the status of the regulations, call the Maine Department of Environmental Protection (DEP) at 207-287-2651.

ASTs, whether they have aboveground or below-ground piping, must also meet the requirements of other regulatory programs, including the Fire Marshal and the Spill Prevention, Countermeasure, and Control (SPCC) programs.

The purpose of this *TankSmart* module is to give the AST owner a brief overview of the regulatory programs applicable to ASTs. The following is a chronology of the development of regulations for underground piping connected to ASTs in Maine:

June 24, 1991 – New installations of underground piping associated with ASTs must be installed and maintained under the same rules as those that apply to piping associated with underground tanks.

July 1, 1995 – All underground piping that is in service must be constructed of a non-corrosive material approved by the DEP.

August 23, 2006 – The Maine Legislature adopted a new law that established requirements for facilities with aboveground tanks storing motor fuel (i.e., gasoline, diesel, biodiesel, aviation gasoline, jet fuel, gasohol, or other fuels used in the operation of a vehicle or motor engine) and that are connected to underground piping. This new law established the following important deadlines for aboveground motor-fuel facilities:

- **January 1, 2007** –register motor-fuel ASTs (except for diesel ASTs) that have underground piping

ASTs that contain petroleum products often have underground product piping connected to them.

- **July 1, 2007, and annually thereafter** – submit inspection reports from a certified tank installer or certified tank inspector of underground piping systems associated with motor-fuel ASTs (except for diesel ASTs, see *TankSmart* Annual Inspection module)
- **January 1, 2009** – register diesel ASTs that have underground piping (see *TankSmart* Annual Inspection module)
- **July 1, 2009, and annually thereafter**– submit inspection reports from a Certified Tank Installer or Certified Tank Inspector of underground piping systems associated with diesel ASTs
- **January 1, 2011** – retrofit pre-June 24, 1991, underground piping systems at all motor-fuel ASTs (including diesel) to meet the DEP’s leak detection standards (see *TankSmart* Piping: Double-Walled Systems Module)



Underground piping associated with ASTs is a frequent source of leaks.

ADDITIONAL REQUIREMENTS THAT APPLY TO ASTs

Maine State Fire Marshal's Permit

Any aboveground petroleum storage tank larger than 60 gallons that is not connected directly to an oil-burning appliance must be permitted by the State Fire Marshal's Office prior to the installation of the AST. Any change in facility information must be updated with the State Fire Marshal's Office.

For more information regarding the AST permitting procedure, contact the Maine State Fire Marshal's Office at 207-626-3890.

For more information regarding the AST permitting procedure, contact the Maine State Fire Marshal's Office at 207-626-3890.

State of Maine Date: 01/01/10
Department of Public Safety
 STATE FIRE MARSHAL'S OFFICE
Above Ground Storage
Site Permit No. 0000

In accordance with the provisions of R.S., Title 25 Sec. 2441 as amended, permit is hereby granted for the installation of flammable liquid storage at:

Location: _____ Owner: _____
 FACILITY NAME: _____ OWNER NAME: _____
 ADDRESS: _____ ADDRESS: _____
 TOWN, ST ZIP: _____ TOWN, ST ZIP: _____

TankNumber:	Chamber:	Liquid Description:	Chamber Capacity:
1	1	GASOLINE-REGULAR	3000
	2	GASOLINE-PREMIUM UNLEADED	2000
Tank Total:			5000
2	1	DIESEL	1000
Tank Total:			1000
Site Total:			6000

Permit Fee: \$15.00 FILE COPY S.P.C.C. Plan is Required. Below Ground piping must meet D.E.P. requirements. For more information call 287-2651

SAMPLE PERMIT. Any aboveground petroleum storage tank larger than 60 gallons that is not connected directly to an oil-burning appliance is required to be permitted by the State Fire Marshal's Office.

Spill Prevention Control and Countermeasure (SPCC) Plan

Federal SPCC plan requirements apply specifically to AST oil storage facilities with an aggregate storage capacity greater than 1,320 gallons and where a discharge could reach a navigable water body, either directly or indirectly. Any 55-gallons or larger aboveground oil storage container or tank counts toward the total aggregate storage capacity. Most areas in Maine are considered locations where a discharge could reach navigable waters.

SPCC plans must be prepared for SPCC-regulated facilities in accordance with good engineering practices to prevent and clean up spills from aboveground oil storage tanks.

SPCC plans must be prepared for SPCC-regulated facilities in accordance with good engineering practices to prevent and clean up spills from aboveground oil storage tanks. “Oil,” as defined in the federal regulations, includes petroleum oils such as gasoline, diesel, and heating oil, as well as non-petroleum oils such as animal or vegetable oils, synthetic oils, and mineral oils.

In 2002, the Maine Legislature gave the DEP authority to oversee compliance with federal SPCC requirements for aboveground storage facilities that are used to market and distribute oil.

An SPCC plan must list the containment equipment and structures used to prevent spills from reaching groundwater or surface water and identify the inspection, monitoring, and oil-transfer procedures that will be followed to prevent a spill. If a spill occurs, a well-developed SPCC plan identifies who should be called and specifies steps, or “countermeasures,” that should be employed to contain the spill and minimize environmental impacts.

A qualified professional engineer must examine the plan and attest that it has been prepared in accordance with good engineering practices. The owner must review the plan every five years, giving consideration to any changes in codes, standards, and available technology in order to keep facilities up to the “state-of-the-art.” The review is the means for determining if there is a need to amend the plan. Plans must also be amended whenever there is a change in the facility that would affect the plan.

OVERFILL PREVENTION

Statistics show that overfills are the most common cause of petroleum spills at AST facilities in Maine. The federal SPCC rules require that ASTs be provided with overfill-protection equipment.

Statistics show that overfills are the most common cause of petroleum spills at AST facilities in Maine. The federal SPCC rules require that ASTs be provided with overfill-protection equipment.

Overfill-protection devices for aboveground tanks include tank-level gauges, high-level alarms, and automatic shutoff devices. If tank gauges are used to meet the federal overfill-protection requirements, they must be readily visible to the delivery person, or if they are not visible to the delivery person, a second person must directly monitor the gauge during filling operations. High-level alarms should sound when the tank is at 90% capacity, and automatic shutoff devices should operate when the tank reaches 95% capacity.

If you have double-walled tanks, and they are not located in a containment dike, the SPCC rule requires that two forms of overfill protection be installed for each tank.

- An audible or visual overfill alarm that goes off when the tank reaches 90% capacity
- An automatic shutoff device designed to shutoff flow to the tank when it reaches 95% capacity



Courtesy of Marcel Moreau Associates, Portland Maine.

Overfill prevention for ASTs is very important. This tank is equipped with a gauge that can be easily read by the delivery person and a high level alarm.

If you have tanks that are located within a containment dike, only one type of overfill-protection device per tank is required.

As an AST operator, you must be aware of what type of overfill-prevention equipment is installed on your aboveground tanks and ensure that the equipment is operating properly at all times.

**For additional information on ASTs,
contact the Oil Spill Prevention Unit at**

207-287-2651

or go to:

www.maine.gov/dep/rwm/abovestorage/index.htm