OIL SPCC PLAN GUIDANCE DOCUMENT

For

Aboveground Storage Tank Facilities

Maine Department of Environmental Protection

October, 2012

* The following information was prepared to assist owners and operators of Maine facilities that may require a Spill Prevention Control and Countermeasure (SPCC) Plan. Facilities specifically included in the information presented here are Retail Motor Fuel Facilities and small marketing Bulk Plants that have aboveground oil storage tanks (ASTs).

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I. QUICK GUIDE TO SPCC PLANS

Most facilities in Maine that store oil (petroleum products) in aboveground storage tanks (ASTs) are required to have what is known as an SPCC Plan – a Spill Prevention, Control and Countermeasure Plan. “Oil" as defined under federal regulations includes petroleum oils such as gasoline, diesel, kerosene and heating oil, as well as non petroleum oils such as animal and vegetable oils, synthetic oils, and mineral oils.

- The requirements for SPCC Plans are in federal Environmental Protection Agency (EPA) regulations, 40 CFR 112. A plan is generally required for any facility with more than 1,320 gallons of aboveground oil storage capacity. The Maine DEP enforces compliance with the federal regulations for such facilities in Maine that market or distributes oil to others.

- If a plan is required for a facility, it is the responsibility of the owner or operator to provide a plan. The plan can be drafted by the owner or operator, or by a professional preparer. If the facility has greater than 10,000 gallons of oil storage capacity, the plan must be certified by a registered Professional Engineer.

- Owners or operators of facilities with 10,000 gallons or less of aboveground storage capacity may self-certify their SPCC Plan provided the facility meets the following criteria:

    - Has an aggregate aboveground storage capacity of 10,000 gallons or less

    - Has had no single discharge exceeding 1,000 gallons or no two discharges each exceeding 42 gallons to navigable waters within any twelve month period in the three years prior to the SPCC Plan self-certification date, and

    - The SPCC Plan must comply with the requirements of sections 112.7 and 112.8 of 40 CFR Part 112.

- Plans must contain a variety of required information. The following is an overview:

    - Certifications – Facility ownership or management must attest to their commitment to provide the resources needed to implement the plan. A certifying engineer (PE) attests to the adequacy of the plan and its conformance with SPCC regulations.

    - Facility Description – Oil storage, handling, process/piping and security features.

    - Discharge Predictions – Where will oil flow if a primary containment (tank or piping) fails?

    - Release Prevention – Description of secondary containment features, and on-site spill response materials.

  - Spill Response – Procedures and contacts for spill response, cleanup and reporting.
  - Training and Inspection – Documentation of procedures used.

- SPCC Plan regulations include numerous requirements affecting the design, construction and operation of oil facilities. These requirements should be taken together with other applicable codes and standards in the management of oil facilities.

II. OVERVIEW OF REGULATIONS

Introduction

Certain facilities handling petroleum products (oil) are required to prepare and use a Spill Prevention Control and Countermeasure (SPCC) Plan. Plans are required by federal regulations 40 CFR 112, under the Clean Water Act (CWA). “Oil" as defined under federal regulations includes petroleum oils such as gasoline, diesel, kerosene and heating oil, as well as non petroleum oils such as animal and vegetable oils, synthetic oils, and mineral oils.

Legislation enacted in Maine in 2002 (Title 38 Section 570(k)) authorizes the Maine Department of Environmental Protection (DEP) to enforce compliance with federal SPCC regulations for AST facilities that market or distribute oil to others. The law also requires DEP to provide educational and technical materials for use by regulated facilities.

Other codes and regulations – federal, state and local – affect the design, construction and operation of facilities that are required to have SPCC Plans.

Does your facility need an SPCC Plan?

Federal SPCC regulations require an SPCC Plan to be implemented for a facility if:

- the facility could reasonably be expected to discharge oil into navigable waters of the U.S. or adjoining shorelines,

AND one of the following conditions is met:

- the facility has more than 1,320 gallons capacity of aboveground storage,

OR

- the facility has more than 42,000 gallons capacity of underground storage, and the underground storage tanks (USTs) are not subject to federal UST regulations (40 CFR 280 or 281). All USTs in Maine are covered by the federal UST regulations.

Any location within Maine can be assumed to meet the first requirement. The aboveground storage threshold is no longer triggered by a single container exceeding 660

gallons, and containers less than 55 gallons are not counted toward the 1,320 gallon facility capacity. Most UST facilities are now exempt from SPCC requirements, including all Maine facilities that have only USTs. However, when a plan is required based on aboveground storage capacity, the plan must note the existence of any USTs in the site plan.

Additional information on the federal SPCC rule can be found on the EPA SPCC web site at: http://www.epa.gov/emergencies/content/spcc/index.htm

What does the SPCC regulation require?

If you determine that the federal SPCC regulations are applicable to your facility, there are many ways in which the regulation will affect you. The following information will give an overview of the requirements, and suggest some strategies for complying with them.

Ideally, the design and construction of petroleum facilities should take SPCC requirements into account. Most recent facilities do so, but many facilities were built before the regulations existed. In those cases there is no "grandfather clause." The regulations apply to old and new facilities alike.

The regulations also affect operations, maintenance, security and inspection of oil facilities. There are also training and recordkeeping requirements, and reporting requirements in the event of a spill.

The Maine law is designed to promote compliance with the federal regulations. It does not contain any additional technical requirements for the facility owner/operator. It does give DEP the authority to inspect facilities and their SPCC plans. If the department believes that a facility's plan does not satisfy the federal requirements, the department shall request an opinion from the United States Environmental Protection Agency as to the legal adequacy of the plan and any amendment necessary to bring the facility into compliance with the federal requirements.

In addition to the federal SPCC regulations and Maine law, there are a variety of other regulations and standards that may apply, depending on the nature of your facility.

What is the deadline for complying with the SPCC regulation?

On October 7, 2010, EPA maintained the November 10, 2010, compliance date for drilling, production or workover facilities that are offshore or that have an offshore component, and for onshore facilities required to have and submit Facility Response Plans (FRPs). However, EPA extended the compliance date an additional year for all other facilities to amend or develop a SPCC Plan until **November 10, 2011**.The amendments do not remove the regulatory requirement for owners or operators of facilities in operation before **August 16, 2002**, to maintain and continue implementing an SPCC Plan in accordance with the SPCC regulations then in effect. Such facilities continue to be required to maintain Plans during the interim until the applicable compliance date for amending and implementing the amended Plans.

Summary of Regulations: The following table gives an outline of many of the regulations, rules and laws that apply to retail motor fuel and small oil distribution AST facilities in Maine.

Agency/ Regulation	**Regulation Applies to**	**Highlighted Requirements**
US EPA 40 CFR 112	AST Facilities	An SPCC Plan is required for certain facilities. Requirements are included that affect all aspects of the facility, including: design and construction (new or modifications); operation and maintenance; training, inspection and spill response.
US EPA, Office of Underground Storage Tanks 40 CFR 280 & 281	USTs and underground piping	Regulations establish minimum requirements nationwide for UST systems. Maine has an accepted state program.
ME DEP 38 MRSA § 570-K(5)	AST Facilities	This revision to the statutes reinforces federal SPCC requirements for facilities marketing or distributing oil to others.
ME DEP 38 MRSA § 570-K(2) & (3) ME DEP 38 MRSA § 563(10)	Underground piping at all AST facilities Underground piping at motor fuel AST facilities	New and replacement underground piping systems at AST facilities after June 24, 1991 must meet the same requirements as underground piping at UST facilities. Bare steel underground piping is prohibited at all AST facilities. Requires motor fuel AST facilities with underground piping to register with the DEP, submit annual inspection reports of their underground piping, and retrofit piping systems as needed to meet the DEP's current standards for piping leak detection. Refer to the statute for deadline dates.
ME DEP Chapter 691, Rules for Underground Oil Storage Facilities ME DEP Chapter 692, Siting of Oil Storage Facilities	USTs and underground piping (including at AST facilities) Siting of UST and AST facilities near drinking water resources	Establishes requirements for secondary containment and leak detection for new and replacement piping installations. Annual facility inspections are required. Protect drinking water resources from oil contamination by controlling the location of new oil storage facilities consistent with legislative policy.
ME DEP 38 MRSA §543 & 38 MRSA §550 ME Fire Marshal Dept. of Public Safety, Chapter 34	Spills and spill reporting	Discharges to the environment are prohibited; no penalty if spills are reported within 2 hours to the DEP and promptly cleaned up. Requires that oil spills at AST facilities be reported to the DEP within 2 hours.

Summary of Regulations (continued):

Agency/ Regulation	Regulation Applies to	Highlighted Requirements
ME DEP 38 MRSA § 413Waste Discharge Program Guidance	AST Facilities within 300 ft of surface water or draining to surface	Discharge of storm-water from containment areas must be treated through an oil-water separator prior to being discharge to a surface water. Facility must file a notice with the DEP's Division of Water Resource Regulation.
ME Emergency Management Agency Emergency Planning and Community Right-to-Know Act	Storing hazardous materials and petroleum products	Requires reporting inventories to MEMA when storing 10,000 pounds (approximately 1500 gallons) or more of petroleum products.
ME Fire Marshal, Dept. of Public Safety, Chapter 34 NFPA 30 & 30-A	ASTs Vaulted tanks Piping Dispensers	Permits are required for aboveground tank installations. Technical/design standards include detailed requirements for storage tanks and dispensing systems pursuant to NFPA 30 & 30-A (2008 editions).
Local Codes and Ordinances	AST & UST Facilities in Organized Towns & Unorganized Territories	Some jurisdictions require local permits for installation or prohibit ASTs altogether. Local zoning and land use ordinances may affect plans for new or renovated facilities. Contact the local town office for facilities located in organized towns, or the Maine Land Use Regulation Commission for facilities located in unorganized territories.

III. GUIDANCE FOR APPLYING REGULATIONS

SPCC Plan requirements are primarily driven by the federal regulations, 40 CFR 112. However, a number of other codes and regulations also can apply to SPCC regulated facilities, as shown in the preceding table. The following sections give additional discussion of the SPCC and other requirements for oil AST facilities.

Purpose of SPCC Plans

Federal SPCC regulations were created under the authority of the Clean Water Act. Their stated purpose is "…to prevent oil discharges from reaching navigable waters of the United States or adjoining shorelines." In effect, the regulation serves to protect surface waters and groundwater in general throughout the country.

Plan requirements are intended to promote:

- Design and construction of facilities with features that will prevent discharges from occurring, and contain those that do occur;

- Training of operators for safe operations and spill emergency preparedness;
- Inspection of facility components to assure continued performance of spill prevention and control features; and
- Organizing information that will assist in spill prevention and spill response.

General Requirements for SPCC Plans

There are numerous requirements for information to be included in SPCC Plans. The general items listed here are administrative or procedural, and must be included in all plans.

- **Plan Review Log** – a location where the owner's representative certifies the plan has been reviewed. The plan must be reviewed by the owner every five years. This periodic review of facilities should give consideration to any changes in codes, standards and available technology in order to keep facilities up to the "state-of-the-art"; and, the review will determine 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.
- **Commitment of Resources** – the owner must also certify their commitment to make available the resources necessary to implement the SPCC Plan and to control and remove any discharge.
- **Professional Engineer (PE) Certification** – the preparing or reviewing engineer certifies the plan has been prepared in accordance with 40 CFR 112 and good engineering practice. Technical amendments to existing plans must also be certified by a Professional Engineer.
- **Facility Conformance** – discuss features and procedures that bring the facility into compliance with the rules. Also discuss any deviations from the rules, and what measures are provided to achieve equivalent environmental protection.
- **Facility Description** – describe the physical layout of the facility. Include a description of all oil storage, drainage and containment features. Include the location of spill response materials. Also describe the surrounding area, including consideration of where a potential discharge could flow toward. Include a facility diagram or site plan showing items relating to oil storage and the SPCC Plan related features.
- **Prevention** – discuss the operating procedures used to prevent spills from occurring.
- **Response** – document the facility's plans for responding to a spill or discharge. Describe how discharges will be contained or controlled, and plans for cleanup. Include steps to be taken by employees, and by emergency response contractors.

- **Contact List –** prepare a list of individuals and agencies to be contacted in the event of a discharge. Include key employees for the facility, company management contacts, emergency response contractors, local Fire Department or police, and state and federal spill reporting hotlines.

- **Waste Disposal –** discuss procedures for disposing of waste following a spill event cleanup.

- **Spill Reporting –** give criteria and procedures for reporting spills.

- **Training –** provide a description of the owner's training program for employees. The training program should include safe operation practices and emergency response procedures. Training should include a review of information contained in the SPCC Plan.

- **Checklist –** plans must include a "Substantial Harm Criteria Checklist". This list contains questions to determine if additional spill prevention planning measures are required, or if an SPCC Plan is considered sufficient. For facilities considered here the SPCC plan will suffice (but the checklist must still be included).

- **Cross-reference –** each SPCC plan must include a means to allow referencing plan information using the numbering system of the federal rules (40 CFR 112).

- **Organization –** information in the plan should be organized for ease of use in an emergency.

Technical Requirements for SPCC Plans

Facility technical information must also be included in SPCC Plans. The information needed will describe the physical facility features related to storing and containing oil, inspections, and securing the facility.

- **Storage –** list all oil storage containers. Give the type of product stored and the capacity of each.

- **Discharge Predictions –** itemize ways in which a release could potentially occur, based on an operational upset condition, or leakage or failure of a container. Discuss quantities, rate of release and likely direction of travel. Show direction(s) of travel on the facility site plan.

- **Containment –** discuss the containment and drainage features of the facility.

- **Inspection –** describe the routine and periodic inspections that are provided for oil containing equipment.

- **Security –** describe facility fencing, lighting, access control, and other features that contribute to the operational security and vandal resistance of the facility.

Aboveground Storage Systems, including Vault Tanks

Aboveground storage tanks are subject to requirements included in the SPCC rules. Maine DEP does not place any additional requirements on ASTs (except at Marine Bulk Terminals – not included in this discussion). The Maine State Fire Marshal's Office (Maine Department of Public Safety), has an inspection and approval program for new ASTs. The Fire Marshal's program includes technical standards pursuant to National Fire Protection Association (NFPA) codes adopted by reference under Chapter 34 of the Fire Marshal's Rules, "Rules and Regulations for Flammable and Combustible Liquids." Chapter 34 includes almost all of the NFPA's 2003 editions of "Flammable and Combustible Liquids Code" (NFPA 30) and "Code for Motor Fuel Dispensing Facilities and Repair Garages" (NFPA 30-A), with a few exceptions as described under Chapter 34.

Highlights of applicable standards for oil storage facilities under the federal SPCC regulations, the State Fire Marshal's rules, and the DEP's underground oil storage facility rules are listed here. Refer to specific codes and regulations for more information.

AST DESIGN AND CONSTRUCTION STANDARDS

- Tanks must be designed in accordance with good engineering practice. Designs shall take into account the intended service – product stored, pressure and temperature.

- ASTs must have secondary containment sized to contain the volume of the single largest compartment within the contained area, plus an allowance for precipitation.

- Restrictions on new AST facilities in relation to drinking water resources are included in DEP's Chapter 692, Siting of Oil Storage Facilities.

- Additional restrictions on tank location and spacing are included in Chapter 34 of the State Fire Marshal's rules. Minimum distances to other tanks, buildings, property lines and roads are defined. Requirements for protection of tanks from physical damage, such as the use of bollards, are also included. Additional restrictions are imposed on storage tanks located within buildings.

- Vault tanks in Maine are regulated as ASTs, and may be located either above or below ground. A vault may contain only a single tank. In multiple tank installations, vaults may have a common dividing wall separating adjacent tanks. Vaults must be liquid-tight and have a means of detecting and removing any liquid that accumulates.

- The use of double-walled ASTs to achieve secondary containment may be allowed. A number of cautions are in order, however. Tanks should be located and installed with special attention to protection from physical damage, since damage could conceivably penetrate both the primary and secondary tank in a single incident. Specific requirements for double-walled ASTs include providing

an anti-siphon device to prevent gravity discharge from the tank, redundant overfill protection including an audible alarm and automatic flow reduction or shutoff device, and a tank level gauge. Refer to NFPA 30, NFPA 30-A and EPA's guidance regarding double-walled tanks for detailed requirements.

- Tanks must be properly vented.

AST OVERFILL PROTECTION

- Federal SPCC regulations require that at least one of the following be provided for all ASTs: an audible or visual high liquid level alarm; a tank liquid level gauge that is visible to the delivery person (unless a second person in direct communication to the delivery person monitors the gauge); or an automatic high liquid level shutoff device. In addition, EPA guidance specifies that double-walled tanks have redundant overfill protection, as described above, when the facility operator is relying solely on the double-walled construction of the tank to provide secondary containment.

- Current NFPA codes require a gauge or other means of determining liquid levels of each tank and the device must be visible to the delivery person. In addition, these codes require that tanks at dispensing facilities, and certain tanks at other types of facilities, also have an automatic shutoff device and an audible high level alarm to prevent overfills.

AST INSPECTION & MONITORING

- Generally, tanks are required to be tested for integrity on a regular schedule. The inspection must be conducted by a certified inspector, and include both visual inspection and one or more means of non-destructive examination. The scheduled frequency is not defined in 40 CFR 112. An inspection frequency of every ten years is widely used for shop fabricated aboveground tanks. The use of an industry standard procedure such as STI – SP-001 or API 653 is strongly recommended. In some cases, alternative methods of testing may be allowed for smaller tanks provided that the Professional Engineer certifying the plan demonstrates that the alternative inspection methods provide equivalent environmental protection.

- Tanks must also be "frequently" inspected visually at the exterior for signs of deterioration or leakage. Again, the frequency is not defined by the federal SPCC regulation. This type of routine inspection can be performed by facility personnel. The frequency is often interpreted as monthly.

- For both types of inspection described above, the facility must have written records of the inspections and keep them on file for at least three years. It is recommended that integrity inspections performed on a ten year or similar schedule be kept on file indefinitely.

- The federal SPCC regulation prohibits the discharge of water with sheen from containment areas such as dikes, and requires that a log be kept of when water is discharged or removed from containment areas. The DEP Division of Water Resource Regulation regulates the discharge of any water from containment areas at AST facilities that are located within 300 feet of surface water, or that discharge directly to surface water. Such facilities are required to treat water from containment areas through an oil-water separator prior to being discharged.
- The State Fire Marshal's Office requires that aboveground tanks be monitored for evidence of leakage by performing daily inventory and reconciliation.
- Level gauges must be regularly tested for proper operation.
- The SPCC plan should give an overview of the routine and periodic inspections provided at the facility.

FIRE MARSHAL INSPECTION & APPROVAL

- A permit from the State Fire Marshal's Office is required for almost all aboveground oil storage tank and container installations.
- Aboveground oil storage facilities must meet the applicable provisions of NFPA 30 and NFPA 30-A, as administered by the State Fire Marshal's Office.

Underground Storage Systems

Underground storage tanks are subject to state and federal regulations. Federal SPCC regulations 40 CFR 112 now cover USTs only in a few special cases. USTs that are regulated by the federal UST regulations 40 CFR 280, or an approved state program per 40 CFR 281, are no longer covered by the SPCC regulations.

Maine has an approved UST program. The regulations applying to USTs are Maine DEP Chapter 691, Rules for Underground Oil Storage Facilities. The Fire Marshal does not regulate underground storage facilities that are regulated by DEP.

Although most USTs are exempt from SPCC regulation, some facilities with USTs also have aboveground storage that triggers SPCC requirements. In these cases, the SPCC regulations require the plan to indicate the location of all USTs on the facility diagram.

When preparing SPCC Plans for this type of facility, good engineering practice would be to include some information in the plan relating to any USTs at the facility. This will allow the certifying engineer to check for basic compliance issues, such as materials and methods of construction, corrosion protection, testing and monitoring.

Highlights of applicable standards are listed here – refer to specific codes and regulations for more information.

UNDERGROUND TANK DESIGN & CONSTRUCTION

- New tanks must be constructed of cathodically protected steel, fiberglass, or other noncorrosive materials.
- New tanks must be provided with full secondary containment and continuous monitoring of the interstitial space.
- Fill pipes must have spill buckets and overfill prevention equipment.
- Tanks must be installed by a Maine Certified Tank Installer.

UST SYSTEM MONITORING AND TESTING

- Daily inventory reconciliation or statistical inventory analysis is required for USTs, except double walled tanks with continuous interstitial monitoring and certain existing tanks.
- Existing tanks can be exempted from daily inventory reconciliation or statistical inventory analysis based on a number of leak detection approaches. The usual approach is for the following conditions to be met:
    - ♦ The tank has an automatic gauging system including electronic line leak detectors for all pressurized lines, capable of detecting a 0.1 gallon per hour (GPH) leak from the tank and piping, that conducts a satisfactory test at least once every 30 days. The system must also be capable of detecting a leak of 3.0 GPH at all times.
    - ♦ The system is otherwise installed and operated in accordance with Chapter 691.
- Galvanic cathodic protection systems must be tested annually.
- Impressed current cathodic protection systems must have rectifier readings taken monthly, and must be tested annually.
- Refer to Maine DEP Chapter 691 for additional information on UST system requirements.

UST SYSTEM REGISTRATION & INSPECTION

- Maine DEP has a registration program applicable to all USTs in the state. There is a fee of $100 per tank every three years. Detailed instructions and the registration form are available from the Maine DEP.
- An annual facility inspection is required to be performed by a Maine Certified Tank Installer or Tank Inspector. A form for this inspection is available from the Maine DEP.

Piping

ABOVEGROUND PIPING

Aboveground fuel piping is covered in the SPCC rules, and is regulated by the Fire Marshal.

- The Fire Marshal requires aboveground piping to be designed and constructed in accordance with NFPA 30.
- NFPA 30 adopts an industry standard approach to fuel piping:
    - ANSI B31 Standards are referenced.
    - The use of low melting-point materials is restricted.
    - Joining methods and supports are discussed.
    - Protection from corrosion is required.
    - Testing is required for new piping.
- A bulk storage tank may not be directly connected to services station (dispensing) facilities.
- A check valve and dry-break are required at the delivery connection point for ASTs.
- The Fire Marshal has adopted NFPA 30A which includes requirements for dispensing facilities. Important safety devices such as emergency (shear) valves are required.
- The federal SPCC regulation requires that aboveground piping be contained such that any leaks or discharges from the piping are retained on site long enough for cleanup to occur. The preferred methods of containment are permanent physical containment structures such as utilizing double-walled piping or locating piping runs entirely within tank dikes or loading rack containment structures. Where the certifying engineer demonstrates that it is not practicable to provide physical secondary containment, the SPCC regulation may allow use of contingency planning, incorporating active containment measures, to address potential spills from piping. The SPCC regulation also calls for regular inspections of the general condition of aboveground piping.

UNDERGROUND PIPING

Underground piping at all AST facilities must be constructed of cathodically protected steel, fiberglass, or other noncorrosive materials. Unprotected underground steel piping has been prohibited since 1995.

Underground fuel piping installed at any AST facility in Maine on or after June 24, 1991 must meet the same requirements under Maine DEP Chapter 691as if it were in a UST system. All underground piping systems at motor fuel AST facilities, regardless of the date of installation, will be required to be retrofitted as necessary to meet the DEP's standards for leak detection by January 1, 2011. These requirements include the following:

- Underground piping systems must be provided with full secondary containment and continuous monitoring of the interstitial space, unless the piping system is a "safe suction" system [Note: A "safe suction" system is rare at AST facilities because it requires that the dispenser be elevated above the tank].
- Pressurized lines must be provided with a line leak detector.
- SPCC rules require integrity and leak testing at the time of installation, and when piping modifications occur.
- Chapter 691 requires that underground piping and monitoring systems at all AST facilities be inspected annually by a Maine Certified Tank Installer or Inspector. Annual inspection reports for underground piping systems at motor fuel AST facilities will be required to be submitted to the DEP starting in July, 2007 except for diesel ASTs where the first submittal of annual inspection reports is not required until July, 2009.
- All motor fuel AST facilities with underground piping will be required to register with the DEP by January 1, 2007, except diesel ASTs which have an extended deadline of January 1, 2009 to be registered with the DEP.
- SPCC Plan preparers should evaluate underground piping systems for compliance with codes and criteria as part of the facility inspection, and provide recommendations for any needed repairs or upgrades.

Bulk Oil Transfers

Bulk oil transfers are transfers between storage containers and transportation modes such as tank trucks and tank cars.

- Oil handling areas where transfers occur must be provided with spill containment and control features. The extent of the features required depends on the nature of the transfer facilities.
- For transfers occurring across a loading/unloading rack, a fixed containment must be provided for the single largest compartment of any tank truck or car handled at

that location. Contained oil from a spill event would be returned to storage, reclaimed or disposed by a licensed waste contractor.

- For transfers that do not take place at a loading/unloading rack, the area must be sufficiently contained and controlled to prevent harmful discharges. This requirement applies not only to transfers, but to any location at a facility where there is a reasonable possibility of a leak, spill or discharge occurring. The requirement can be met through the use of permanent or temporary containment features, or response equipment, or by any combination of these elements.

- Deliveries to USTs must be observed by a representative of the facility owner, operator or oil transporter.

Truck Parking and Portable Tank Storage

Many terminals have parking areas for trucks – both bulk transports and delivery trucks. Storage of portable tanks is also a common occurrence. These containers are typically viewed as conveyances for the ***transportation*** of oil regulated by the Department of Transportation (DOT). These containers are also viewed as oil ***storage*** when they are not being used for transportation – and when this happens they become subject to regulation by EPA under the SPCC rules.

- Generally, a truck that is registered and used for on-the-road transport of oil is regulated by the DOT as transportation rather than by the SPCC regulations as storage. A truck being filled or making a delivery is considered to be involved in transportation. However, the facility and transfer area are at the same time covered by SPCC regulations.

- If a truck or tank is parked for some time during routine daily operations, it is not considered as storage. Examples would be the trucker who parks while completing paperwork, or the technician who parks at the facility while between job locations.

- If a truck or tank is parked loaded with product for any extended period of time unattended, it becomes a storage container, regulated by the SPCC regulations.

- If a truck or tank is considered storage, it is subject to the SPCC General Secondary Containment requirements.

- If a container is completely emptied for parking or storage it is still technically subject to SPCC rules. However, EPA has not expressed interest in enforcing a strict interpretation in this case. The owner/operator must be sure that all parked containers have been properly emptied. The facility will be held accountable if any residual product is discharged from such a container.

Training

- Personnel involved in operating regulated facilities must receive training covering the following material:
    - Contents of the facility SPCC plan.
    - Facility operations.
    - Operation and maintenance to prevent discharges.
    - Discharge response procedures.
    - Applicable laws and regulations.
- Provide annual briefings for all oil handling personnel to review contents of the SPCC plan.
- The SPCC plan should provide an overview of the facility's training program.

Security

- SPCC regulations require the facility owner to implement security features tailored to the facility's specific characteristics and location.
- The implementation of security measures is very site specific. What works for one facility may not be appropriate for another.
- The SPCC rules allow for exceptions to the fencing requirement, but alternative measures resulting in "equivalent environmental protection" must be provided. Maine State Fire Marshal regulations require aboveground tanks to be fenced, except when the entire facility is fenced.

Spills & Spill Reporting

- Under DEP's statutes, if an oil spill is promptly reported (within 2 hours), removed, and cleaned up to the Department's satisfaction, the owner is not subject to any fines or penalties for causing a spill. This law applies to a spill of any quantity of oil. The DEP has a 24-hour oil spill reporting hotline (1-800-482-0777).
- State Fire Marshal's regulations require that AST facilities report oil spills to the DEP within 2 hours.
- The one exception to the Maine law is for surface spills of 10 gallons or less on impervious surfaces, such as asphalt or concrete, at UST facilities only. A customer overfill at a retail UST filling station is an example of this type of spill. The spill must be cleaned up within 24 hours and a written log of such events

must be kept at the facility. For these types of spills at UST facilities, the written spill log suffices for "reporting" in lieu of calling the spill into the DEP.

- Under federal law, any spill of oil that reaches navigable waters or adjacent shorelines, causes sheen, causes a sludge or emulsion, or violates any applicable water quality standards must be reported to the National Response Center's 24-hour hotline (1-800-424-8802).
- There are some exceptions to the federal reporting law. These exemptions include properly functioning vessel engines and NPDES permitted releases. Contaminated bilge water is not exempt however.
- SPCC regulations require reporting of spills, with written information submitted to the EPA regional administrator within 60 days:
    - For a single discharge of more than 1,000 gallons.
    - For any two discharges of more than 42 gallons of oil in any 12 month period.

IV. COMMON PROBLEMS

Releases can occur at small bulk and retail fueling facilities due to a wide variety of reasons. However, the three following problems account for a large number of reported discharges:

Leaking Underground Piping – Many underground piping systems at AST facilities do not meet current standards for double-walled piping and leak detection systems. Consequently, leaks in these nonconforming systems can occur for a long period of time undetected. In some cases where this has occurred, major contamination has resulted, leading to costly clean-ups. Even where underground piping systems meet current requirements, leaks can occur undetected if the facility owner/operator is not familiar with the piping and leak detection system, and the system is not properly maintained or inspected.

Inadequate Overfill Protection – Tank overfills are the single largest cause of oil discharges at AST facilities. The federal SPCC rules require that tanks be provided with overfill protection. Overfill protection devices include tank level gauges, high level alarms, and automatic shutoff devices.

Inadequate Secondary Containment - The federal SPCC rules require secondary containment for oil storage tanks and other containers that are 55 gallons in size (i.e., a standard barrel) or larger. Dikes are the most commonly used method of secondary containment for tanks, but are sometimes undersized or not adequately maintained. Dikes must be maintained so that they are liquid tight, and any dike drainage valves must be kept normally closed so that product will not simply drain out of the dike in the event of a spill at a tank.

V. CODES AND STANDARDS

There are a wealth of codes, criteria, regulations and industry standards that provide useful information for the design, construction and operation of oil facilities. Some of these have mandatory requirements for facilities; others have information that may be taken as recommendations representing "good practice". The following is far from a complete list, but represents most of the core standards needed for small aboveground oil facilities.

Regulations

40 CFR 112	US EPA, Spill Prevention Control & Countermeasures
40 CFR 280	US EPA, Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)
Chapter 34	Maine Fire Marshal, Dept. of Public Safety Rules and Regulations for Flammable and Combustible Liquids
Chapter 691	Maine Department of Environmental Protection Rules for Underground Oil Storage Facilities
Chapter 692	Rules for The Siting of Oil Storage Facilities

Codes

NFPA 30	Flammable and Combustible Liquids Code
NFPA 30A	Automotive and Marine Service Station Code
NFPA 70	National Electrical Code

Standards

API 653	Tank Inspection, Repair, Alteration and Reconstruction
PEI RP 200	Petroleum Equipment Institute Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling
STI SP001	Steel Tank Institute Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids
API 2610	Design, Construction, Operation, Maintenance, and Inspection of Terminal and Tank Facilities

VI. INSPECTIONS

Inspection Item	Frequency	Applicable Standards
ASTs	"Frequent" (monthly recommended)	STI SP001
ASTs	"Periodic" (as determined by inspection standard)	STI SP001 (for shop built tanks) API 653 (for field erected tanks)
Aboveground Piping	"Regular" (monthly recommended)	40 CFR 112 (visual inspection)
USTs and ASTs with underground piping	Annual (required)	ME DEP Chapter 691

VII. INFORMATION RESOURCES

Federal Regulations

- **Federal SPCC regulation**: 40 CFR Part 112, Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities, Final Rule, U.S. Environmental Protection Agency, 67 Federal Register 137 (December 5, 2008)
- **Revised Deadlines for complying with the federal SPCC regulation**: 40 CFR Part 112, Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities, Final Rule, U.S. Environmental Protection Agency, 71 Federal Register 33 (November 10, 2011)
- **EPA SPCC Guidance for Regional Investigators (**Nov. 28, 2005, revised 2/3/06). Office of Emergency Management, EPA 50-B-05-001

State Statutes & Rules

- **Maine DEP SPCC Statute**: 38 MRSA § 570-K
- **Underground Tanks & Piping**: Maine DEP, Chapter 691, Rules for Underground Oil Storage Facilities, March 13, 2012
- **Aboveground Tanks & Piping**: State Fire Marshal's Office Chapter 34 Rules and Regulations for Flammable and Combustible Liquids, March 17, 2009

- **Discharging Dike Water to Surface Waters**: Waste Discharge Program Guidance, Maine DEP, Division of Water Resource Regulation, August 31, 2004

Spill Response

- **Responding to Oil & Hazardous Materials Spills (Maine DEP)**

- **Maine DEP Statutes for Spills and Spill Reporting**: 38 MRSA § 543 and 38 MRSA § 550

General SPCC Web Sites

- **EPA SPCC web site**
  http://www.epa.gov/emergencies/content/spcc/index.htm

- **Maine DEP SPCC web site**
  http://www.maine.gov/dep/waste/spcc/index.html

Publications

- **Recommended Practices for Installation of Aboveground Storage Systems for Motor-Vehicle Fueling**, PEI/RP200-08. Petroleum Equipment Institute. 2008. Petroleum Equipment Institute, P.O. Box 2380, Tulsa, OK 74101-2380; (918) 494-9696

- **NFPA 30, Flammable and Combustible Liquids Code, 2012 Edition.** National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101; (800) 344-3555

- **NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2012 Edition**. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101; (800) 344-3555

- **Flammable and Combustible Liquids Code Handbook, Sixth Edition**. Robert P. Benedetti, C.S.P., Editor. 1997. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101; (800) 344-3555

- **Handbook of Storage Tank Systems: Codes, Regulations, and Designs**. Wayne B. Geyer, Editor. 2000. Marcel Dekker, Inc., 270 Madison Ave., New York, NY 10016; (212) 696-9000

VIII. AGENCY CONTACT LIST

Federal SPCC plan requirements for ***any facilities with more than 1,320 gallons of aboveground oil storage:***

U.S. Environmental Protection Agency: Joseph Canzano, EPA Region 1 (HBR), One Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1763; e-mail: canzano.joseph@epa.gov

State SPCC program for ***facilities with more than 1,320 gallons of aboveground oil storage that market or distribute oil to others:***

Maine Department of Environmental Protection: Butch Bowie, Division of Technical Services, Dept. of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; telephone: (207) 287-4804 or in-state toll free (800) 452-1942; e-mail: butch.c.bowie@maine.gov

State requirements for ***discharging stormwater from containment areas to surface waters****:*

Maine Department of Environmental Protection: Erich D. Kluck, Environmental Specialist, Dept. of Environmental Protection, Division of Water Resource Regulation, 17 State House Station, Augusta, ME 04333-0017; telephone: (207) 822-6300 or (207) 592-2068 ; e-mail: erich.d.kluck@maine.gov

State permitting for ***aboveground oil storage tanks and aboveground piping****:*

Maine State Fire Marshal's Office: Stephen W. Dixon, Sr., Public Safety Inspector, State Fire Marshal's Office, 52 State House Station, Augusta, ME 04333-0052; telephone: (207) 626-3890; e-mail: stephen.w.dixon@maine.gov

State requirements for ***underground tanks and underground piping***:

Maine Department of Environmental Protection: Underground Tanks Unit, Dept. of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; telephone: (207) 287-2651 or in-state toll free (800) 452-1942.

Emergency response planning for ***facilities storing oil and/or hazardous materials****:*

Maine Emergency Management Agency: Robert S. Gardner, Technological Hazards Specialist, 72 State House Station, Augusta, ME 04333-0072; telephone: (207) 6224-4400; e-mail: robert.s.gardner@maine.gov

State requirements for ***storage of hazardous matter****:*

Maine Department of Environmental Protection: John Dunlap, Environmental Specialist, Dept. of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; telephone: (207) 287-3547 or in-state toll free (800) 452-1942; e-mail: john.m.dunlap@maine.gov.

Local permitting requirements for ***aboveground storage tank facilities:***

Organized towns: Contact your town office or Code Enforcement Officer.
Unorganized territories: Contact the Maine Dept. of Conservation, Land Use Planning Commission, 22 State House Station, Augusta, ME 04333-0022; telephone: (207) 287-2631.