

Spill Prevention, Control & Countermeasure (SPCC) Overview

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Code of Federal Regulations - Oil

- Title 40: Protection of the Environment
 - Part 112: Oil Pollution Prevention
 - Requirements to help prevent oil discharges from reaching navigable waters or adjoining shorelines
 - Procedures to prevent oil discharge (e.g., tank testing);
 - Control measures to keep an oil discharge from entering navigable waters (i.e., containment); and
 - Countermeasures to contain, clean up, and mitigate any oil discharge that affects navigable waters (i.e., spill response measures)
 - Includes requirements for Facility Response Plans (FRPs)
 - Part 110 – Discharge of Oil (Sheen Rule)
 - Prohibition of oil discharge
 - Reporting requirements
 - Establishes harmful quantity
 - Promulgated under the authority of the Clean Water Act (CWA) §311(j)(1)(C)
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Spill Prevention, Control, & Countermeasure Rule

- Requirements include:
 - Preparation & implementation of SPCC Plan
 - Reviewing and amending the SPCC Plan
 - Routine visual inspections
 - Tank & piping integrity testing
 - Secondary containment
 - Oil transfer procedures
 - Training requirements
 - Drainage procedures

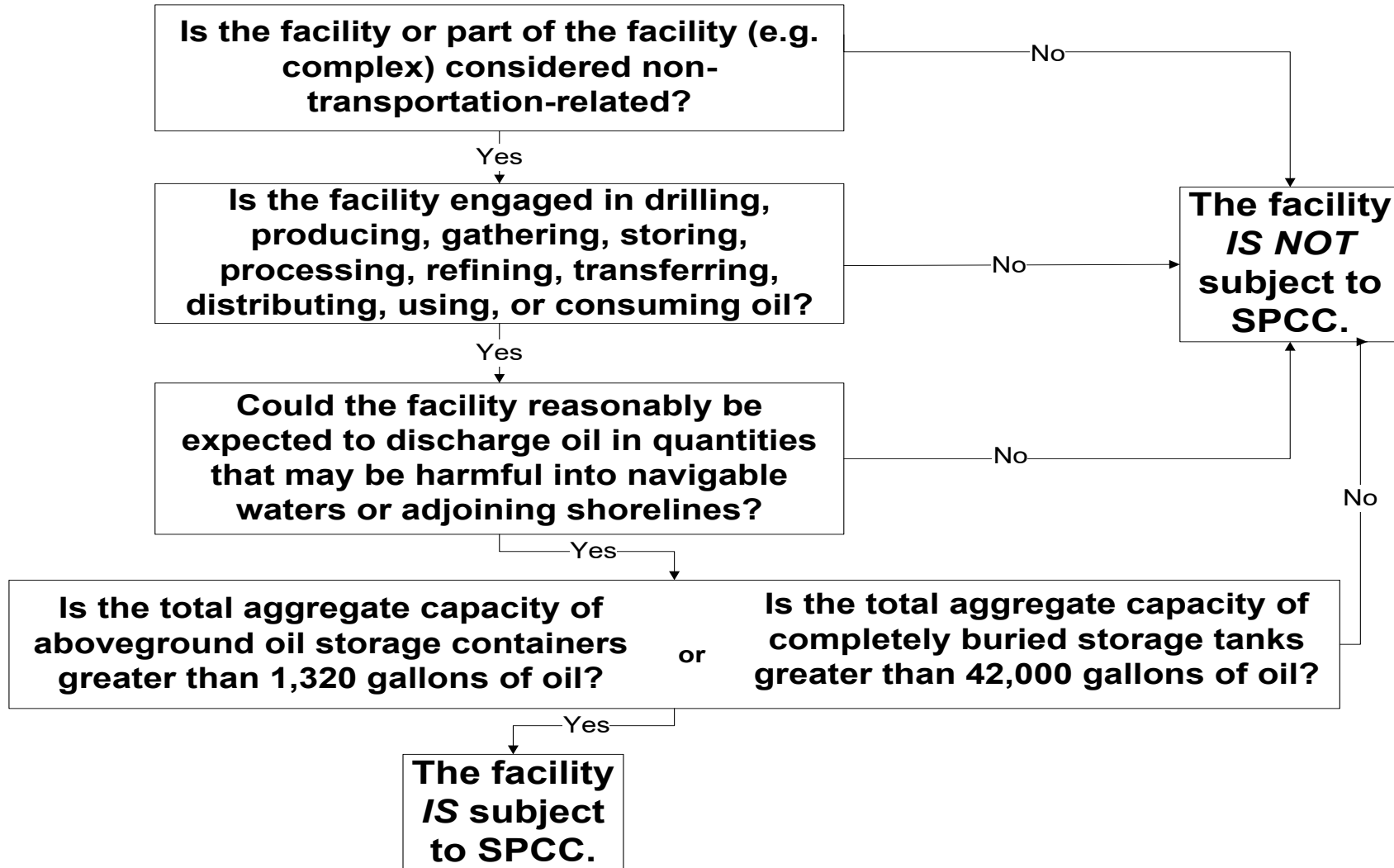
*Objective: To prevent oil from reaching navigable waters
of the United States & adjoining shorelines*

Significance of Marinas to SPCC

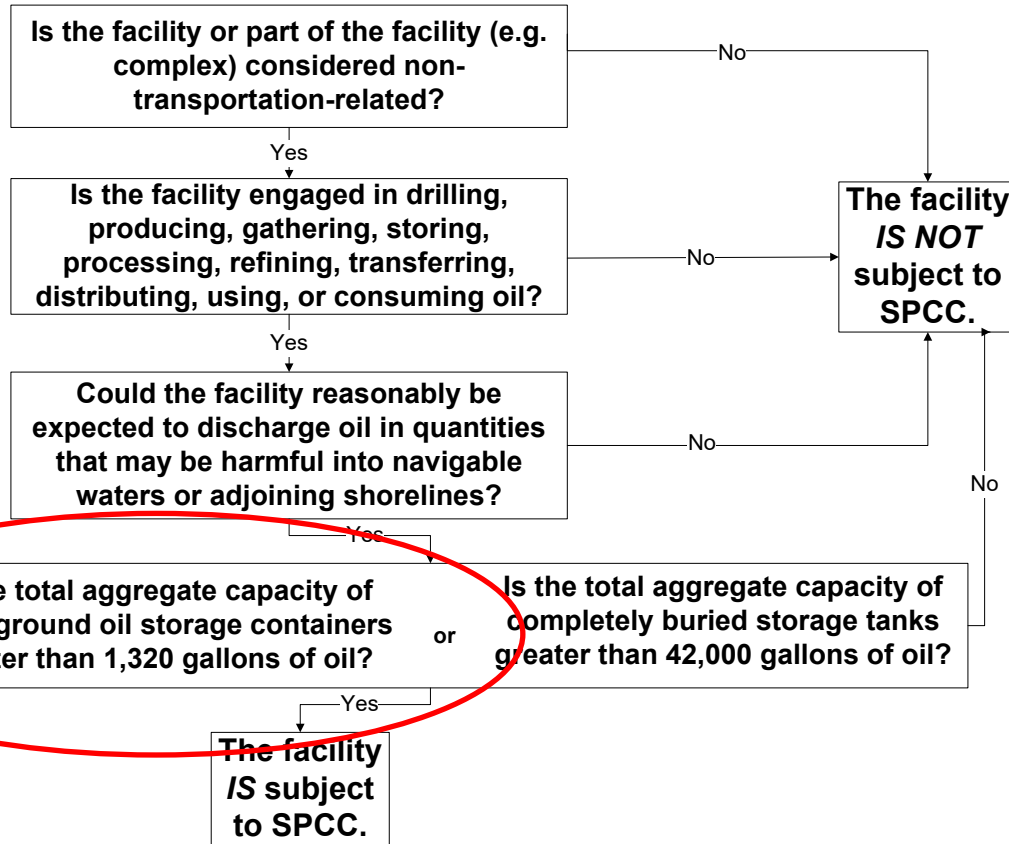


- Distance to navigable waters
 - Potential proximity to sensitive ecosystems
 - Onsite oil storage
 - Fueling and transfer operations
 - Maintenance activities
 - High seasonal traffic
- 

SPCC Applicability



SPCC Applicability




*When determining the total oil storage capacity, only consider aboveground storage containers that are **55 gallons or greater**.

- This includes oil filled equipment!

SPCC Plan



- Regulated facilities are required to prepare and implement an SPCC Plan (§112.3)
 - An SPCC Plan contains procedures that address:
 - Changes to oil operations (Plan Amendments)
 - Inspections and Tests of Tanks & Piping
 - Overfill protection
 - Facility Security
 - Discovery/cleanup of oil discharges
 - Secondary Containment
 - Oil Transfers
 - Facility Drainage
- 

SPCC Basics

- There is no SPCC registration or submittal requirement
 - Oil containers 55-gallons and greater are regulated [§112.1(f)(2)(ii)]
 - Completely Buried Containers (Underground Storage Tanks) regulated by 40 CFR 280 & 281 are exempt [§112.1(f)(2)(i)]
 - A Professional Engineer ultimately certifies that the SPCC Plan is appropriate for the facility [§112.3(d)]
 - Initial & Annual Training [§112.7(f)]
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SPCC Plan Basics



- Management Approval is needed [§112.7]
 - A copy of the Plan must be present & available for review for facilities manned for more than four hours [§112.3(e)]
 - Plan must be reviewed and evaluated at least once every 5 years [§112.5(b)]
 - Written evaluation
 - Includes statement identifying that the facility will/will not amend the Plan
-

PE Certification [§112.3(d)]

- The SPCC Plan needs to be certified by a Professional Engineer (PE).
- PE certifies that the facility's equipment, design, construction, and maintenance procedures used to implement the Plan are in accordance with good engineering practices.
- Generally includes:
 - Name
 - Registration number and State
 - Date of Certification
 - PE seal affixed to Plan

However... there is an exception to this requirement under the rule for
Qualified Facilities

Qualified Facilities [§112.6]

A qualified facility is a smaller oil storage facility that is eligible for streamlined **regulatory requirements**. Facilities may qualify for Tier I or Tier II self certification if the facility has:

- No single discharge exceeding 1,000 gallons or no two discharges exceeding 42 gallons in any 12-month period in the last 3-years
 - 10,000 gallons or less of AST facility capacity
 - Tier II (Clear discharge history)
 - May choose to self-certify full SPCC (no PE certification of Plan required)
 - Can include environmentally equivalent measures when a PE certifies the alternative measures in accordance with §112.6(b)(3)(1) and §112.6(b)(4).
 - Tier I (Clear discharge history and no individual AST with a capacity greater than 5,000 gallons)
 - Streamlined requirements for integrity testing and security
 - Option to complete and implement a self-certified Plan template (found in Appendix G) in lieu of a full SPCC Plan to comply with the SPCC regulation.
 - Tier II cannot use the template
-

Qualified Facility Applicability

If the facility total aboveground oil storage capacity is 10,000 gallons or less...		
And...	And the facility has...	Then the facility is a:
In the three years before the SPCC Plan is certified, the facility has had no discharges to navigable waters or adjoining shorelines as described below: <ul style="list-style-type: none">• A single discharge of oil greater than 1,000 gallons, or• Two discharges of oil each greater than 42 gallons within any 12-month period.	No individual aboveground oil containers greater than 5,000 gallons;	Tier I Qualified Facility: Complete and self-certify Plan template (Appendix G to 40 CFR part 112) in lieu of a full PE-certified Plan or other self-certified SPCC Plan.
	Any individual aboveground oil container greater than 5,000 gallons;	Tier II Qualified Facility: Prepare a self-certified Plan in accordance with all applicable requirements of §112.7 and subparts B or C of the rule, in lieu of a PE-certified Plan.

Tier I: No aboveground oil containers greater than 5,000 gallons & total oil storage capacity \leq 10,000 gallons. Template is available.

Tier II: An aboveground oil storage container can be greater than 5,000 gallons but total oil storage capacity \leq 10,000 gallons. No template.

Tier I Template

- Template is designed to be a simplified SPCC Plan.
 - Includes only the requirements that should apply to Tier I regulated facilities.
 - Eliminates and/or modifies certain requirements and provisions that generally do not apply to facilities that store or handle smaller volumes of oil.
 - An electronic version of the template is available at <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/tier-i-qualified-facility-spcc-plan-template>
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Tier I Qualified Facility SPCC Plan

This template constitutes the SPCC Plan for the facility, when completed and signed by the owner or operator of a facility that meets the applicability criteria in §112.3(g)(1). This template addresses the requirements of 40 CFR part 112. Maintain a complete copy of the Plan at the facility if the facility is normally attended at least four hours per day, or for a facility attended fewer than four hours per day, at the nearest field office. When making operational changes at a facility that are necessary to comply with the rule requirements, the owner/operator should follow state and local requirements (such as for permitting, design and construction) and obtain professional assistance, as appropriate.

Facility Description

Facility Name _____

Facility Address _____

City _____ State _____ ZIP _____

County _____ Tel. Number () - _____

Owner or Operator Name _____

Owner or Operator Address _____

City _____ State _____ ZIP _____

County _____ Tel. Number () - _____

I. Self-Certification Statement (§112.6(a)(1))

The owner or operator of a facility certifies that each of the following is true in order to utilize this template to comply with the SPCC requirements:

I _____ certify that the following is accurate:

- I am familiar with the applicable requirements of 40 CFR part 112;
- I have visited and examined the facility;
- This Plan was prepared in accordance with accepted and sound industry practices and standards;
- Procedures for required inspections and testing have been established in accordance with industry inspection and testing standards or recommended practices;
- I will fully implement the Plan;
- This facility meets the following qualification criteria (under §112.3(g)(1)):
 - The aggregate aboveground oil storage capacity of the facility is 10,000 U.S. gallons or less; and
 - The facility has had no single discharge as described in §112.1(b) exceeding 1,000 U.S. gallons and no two discharges as described in §112.1(b) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan self-certification date, or since becoming subject to 40 CFR part 112 if the facility has been in operation for less than three years (not including oil discharges as described in §112.1(b) that are the result of natural disasters, acts of war, or terrorism); and
 - There is no individual oil storage container at the facility with an aboveground capacity greater than 5,000 U.S. gallons.
- This Plan does not deviate from any requirement of 40 CFR part 112 as allowed by §112.7(a)(2) (environmental equivalence) and §112.7(d) (impracticability of secondary containment) or include any measures pursuant to §112.9(c)(6) for produced water containers and any associated piping;
- This Plan and individual(s) responsible for implementing this Plan have the full approval of management and I have committed the necessary resources to fully implement this Plan.

3. Inspections, Testing, Recordkeeping and Personnel Training (§§112.7(e) and (f), 112.8(c)(6) and (d)(4), 112.9(c)(3), 112.12(c)(6) and (d)(4)):

Table G-5 Inspections, Testing, Recordkeeping and Personnel Training

An inspection and/or testing program is implemented for all aboveground bulk storage containers and piping at this facility. (§§112.8(c)(6) and (d)(4), 112.9(c)(3), 112.12(c)(6) and (d)(4))	<input type="checkbox"/>
The following is a description of the inspection and/or testing program (e.g. reference to industry standard utilized, scope, frequency, method of inspection or test, and person conducting the inspection) for all aboveground bulk storage containers and piping at this facility:	
Inspections, tests, and records are conducted in accordance with written procedures developed for the facility. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph. (§112.7(e))	<input type="checkbox"/>
A record of the inspections and tests are kept at the facility or with the SPCC Plan for a period of three years. (§112.7(e)) (See Inspection Log and Schedule in Attachment 3.1)	<input type="checkbox"/>
Inspections and tests are signed by the appropriate supervisor or inspector. (§112.7(e))	<input type="checkbox"/>
Personnel, training, and discharge prevention procedures (§112.7(f))	
Oil-handling personnel are trained in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan. (§112.7(f))	<input type="checkbox"/>
A person who reports to facility management is designated and accountable for discharge prevention. (§112.7(f))	<input type="checkbox"/>
Name/Title: _____	
Discharge prevention briefings are conducted for oil-handling personnel annually to assure adequate understanding of the SPCC Plan for that facility. Such briefings highlight and describe past reportable discharges or failures, malfunctioning components, and any recently developed precautionary measures. (§112.7(f)) (See Oil-handling Personnel Training and Briefing Log in Attachment 3.4)	<input type="checkbox"/>

Amendment of SPCC Plan [§112.5]

- Amend Plan when there is a change in facility design, construction, operation, or maintenance that materially affect the potential for a discharge as described in §112.1(b) (Technical Amendment)
 - Commissioning and decommissioning containers
 - Replacement, reconstruction, or movement of containers
 - Reconstruction, replacement, or installation of piping systems
 - Construction or demolition that might alter secondary containment structures
 - Changes in product or service
 - Revision of operating or maintenance procedures
- Technical Amendment must be prepared within 6 months and implemented ASAP, but not later than 6 months following preparation of the amendment
 - A licensed PE must review and certify a Plan with technical amendments
- Administrative (non-technical) amendments do not require PE review and certification



Core SPCC Concepts



Secondary Containment

General Secondary Containment [§112.7(c)]

- This is the **minimum** expectation for containment for all areas and equipment with the potential for a discharge (piping, oil-filled equipment, transfer areas, etc.)
- Requires sufficient secondary containment for the *most likely discharge*
- Methods can be passive or active:
 - Traditional containment structures: concrete, metal, earthen dikes, or other permanently installed structures (passive)
 - Spill pads, absorbents, etc. (active)
 - Covering a storm drain prior to transfer (active)

*Active containment methods must be **appropriate** to address the most likely spill scenario, **present**, and **accessible** to be deployed in order to prevent or contain a discharge before it reaches navigable waters.

General Secondary Containment



Roll-over berm
provides containment
for the most likely spill
scenario during
transfer activities.

Secondary Containment

Sized Secondary Containment [§112.8(c)(2)]

- Additional, more stringent secondary containment requirements for bulk storage containers
 - Requires sufficient volume to contain largest tank in the containment structure with an allowance for precipitation (freeboard).
 - Can be accomplished through a diked structure, retention/drainage pond, or other drainage system.
 - Double-walled tanks may also serve as sized secondary containment
 - Specific/Sized secondary containment requirements at loading/unloading racks as well, but these are not usually applicable to marinas
-

Sized Secondary Containment



Double-walled
marina fuel tank –
adequate secondary
containment

*must monitor the
interstitial space

Inadequate Secondary Containment



Inadequate Secondary Containment





**SUFFICIENT SECONDARY
CONTAINMENT?**

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Facility Drainage [§112.8(b)]/§112.8(c)(3)]

Diked Areas

- Restrain drainage with:
 - Valves (open-and-close design) or
 - Pump (manually activated) or
 - Properly designed treatment
 - Inspect/document for presence of oil prior to discharge

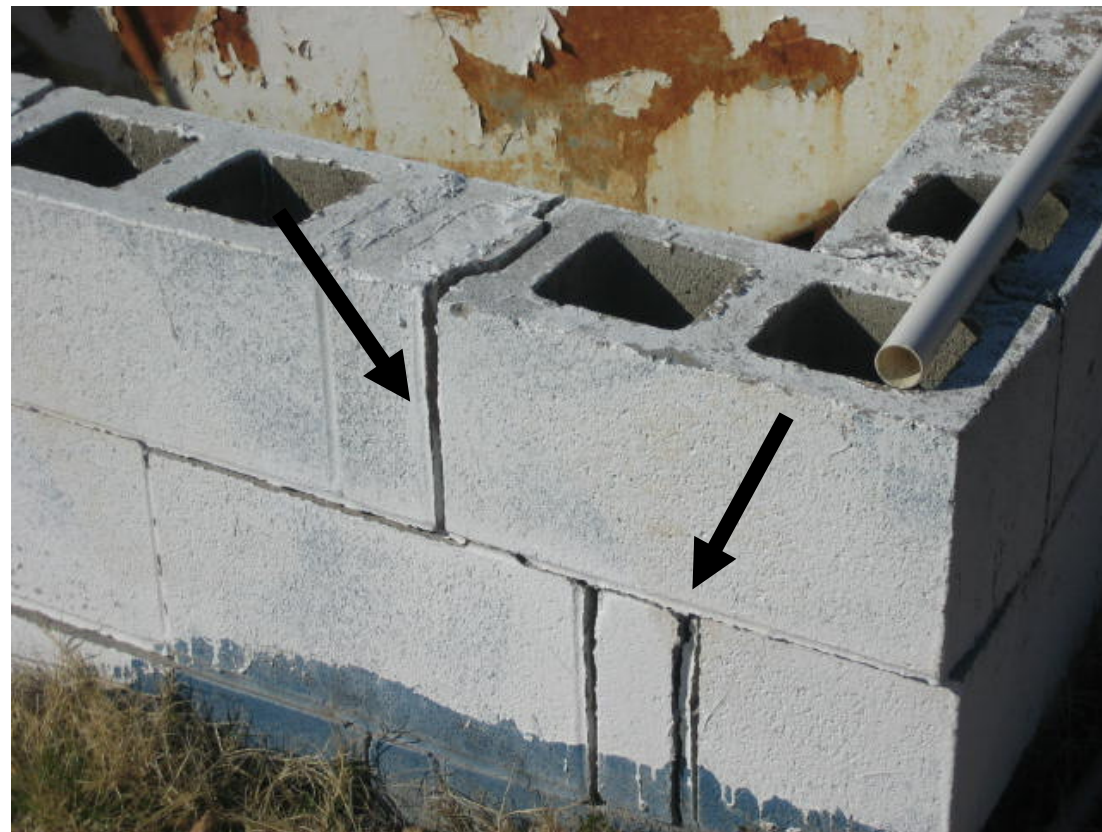
Undiked Areas

- Restrain drainage with:
 - Properly designed drainage system to retain or return oil
 - Examples: retention ponds, lagoons, catchment basins
 - Diversionary System
-

Secondary Containment/Facility Drainage

- What to Look For/Address:
 - Capacity of the system to contain oil
 - Cracks and discoloration in containment system materials
 - Presence of spilled or leaked material (standing liquid)
 - Corrosion and/or erosion of the system
 - Level of precipitation in diked area and available capacity versus design capacity; drainage records
 - Dike or berm permeability
 - Presence of debris
 - Operational status of drain valves or other drainage controls (open valves)
 - Excessive vegetation
 - Holes or penetrations to the containment system created by burrowing animals
 - Are active containment measures appropriate, present and deployable?
 - Is the containment *sufficiently impervious* to spilled oil?
-

Sufficiently Impervious To Contain Oil?



Inspections & Tests [§ 112.7(e)]

General SPCC Recordkeeping Requirements:

- **Written** procedures of tests/inspections
 - **Maintain** records of tests/inspections for 3 years
 - Records must be **signed** by appropriate supervisor/inspector
-

Inspections & Tests [§112.8(c)(6)]

Integrity Testing

- Test bulk storage tanks for integrity on a regular schedule & when repairs are made
- In accordance with **industry standards**, the following must be determined:
 - Appropriate qualifications for personnel conducting tests/inspections
 - Frequency/type of inspection or test, which takes into account tank size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried)
- Must keep comparison records
- Most common industry standard for marinas: STI-SP001

***Failure of a container may be indicative of an inadequate integrity testing program**

Inspections & Tests [§112.8(c)(6)]

Visual Inspections

- The facility must also conduct routine inspections of the oil storage tanks and secondary containment
 - In addition to inspecting the storage tanks, must also inspect:
 - Tank supports
 - Foundations
 - Must inspect outside of container for signs of:
 - Deterioration
 - Discharges
 - Accumulation of oil inside diked areas
 - Requirements for inspections/testing of piping covered under §112.8(d)(4)
-



Fuel tank at a marina facility with visible signs of corrosion

Overfill Protection [§112.8(c)(8)]

- Follow good engineering practices to avoid discharges from container installations
 - Provide at least one of the following devices:
 - High liquid level alarms
 - High liquid level pump cutoff
 - Direct audible or code signal communication between container gauger and pumping station
 - Fast-response system for determining liquid level of each bulk storage container, with person present to monitor
 - Regularly test liquid level sensing devices (follow manufacturers' specifications)
-

Visible Oil [§112.8(c)(10)]



Visible discharges of oil must be promptly removed.



Visible Discharges of Oil



Facility Security [§112.7(g)]

Goal: to prevent unauthorized access to oil handling areas, deter vandalism, and promote safe operations

- Appropriate facility lighting
 - Secure master flow and drain valves and out-of-service and loading/unloading connections of oil pipelines
 - Prevent unauthorized access to starter controls on oil pumps
 - Control access to oil handling , process, and storage areas
 - Fencing
 - Security personnel
 - Locks
-

Training [§112.7(f)]

- Train oil-handling personnel
 - Operation/maintenance of prevention equipment
 - Discharge procedure protocols
 - Applicable pollution control laws, rules, and regulations
 - General facility operations
 - Contents of the facility SPCC Plan
 - Designate person accountable for discharge prevention and who reports to facility management
 - Schedule/conduct at least one briefing/year:
 - Known discharges and failures, malfunctioning components, new precautionary measures
-

Reporting Spills per 40 CFR Part 110

You must report an oil spill to the National Response Center (NRC) if one or more of the following occur:

- The spill is to navigable waters or the adjoining shoreline
- Water quality standards could be violated
- The spill causes a sheen or discoloration
- The spill causes a sludge or emulsion

NRC:

1-800-424-8802

SPCC Spill Reporting Requirements [§112.4]

Report to the EPA Regional Administrator (RA) when there is a discharge of:

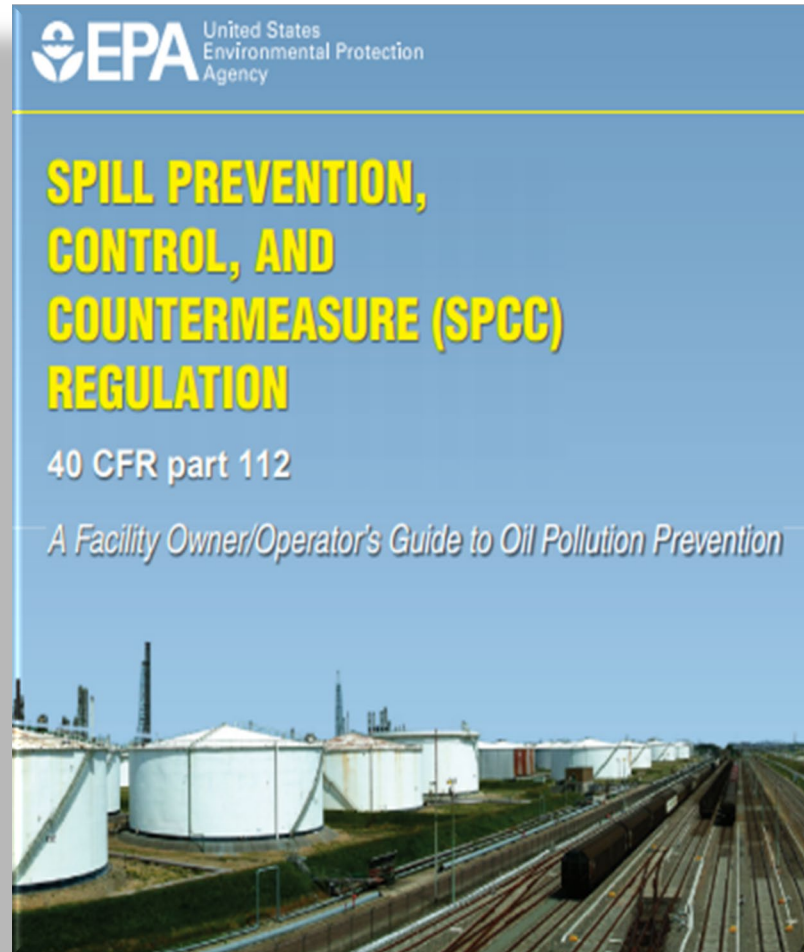
- More than 1,000 U.S. gallons of oil in a single discharge to navigable waters of the U.S. or adjoining shorelines
 - More than 42 U.S. gallons of oil in each of two discharges to navigable waters of the U.S. or adjoining shorelines within a 12-month period
 - When making this determination it is the amount of the discharge in gallons that reaches navigable waters of the U.S. or adjoining shorelines
 - An owner/operator must report the discharge(s) to the EPA Regional Administrator within 60 days of the incident
-

SPCC Guidance Documents

EPA website has fact sheets and guidance documents to assist the regulated community:

www.epa.gov/oilspill

- **SPCC Regulation – A Facility Owner/Operator’s Guide to Oil Pollution Prevention**
 - EPA’s Blue Brochure for Marina Operators on the SPCC Regulation
- **SPCC Guidance for Regional Inspectors**
 - Designed to assist in implementing the SPCC rule requirements
 - Not just for inspectors!



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