USEPA Spill Prevention Control & Countermeasures Regulation (SPCC) Inspector Short Course

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Legal Disclaimer

This presentation is meant to provide an overview to EPA inspectors, owners and operators of facilities of regulated, and the general public on the implementation of the Spill Prevention, Control, and Countermeasure (SPCC) rule (40 CFR Part 112). This presentation seeks to promote nationally-consistent implementation of the SPCC rule. The statutory provisions and EPA regulations described in this presentation contain legally binding requirements. This presentation does not substitute for those provisions or regulations, nor is it a regulation itself. In the event of a conflict between the discussion in this presentation and any statute or regulation, this presentation is not controlling. This presentation does not impose legally binding requirements on EPA or the regulated community, and might not apply to a particular situation based upon the circumstances. The word “should” as used in this presentation is intended solely to recommend or suggest an action, and is not intended to be viewed as controlling. Examples in this presentation are provided as suggestions and illustrations only. While this presentation indicates possible approaches to assure effective implementation of the applicable statute and regulations, EPA retains the discretion to adopt approaches on a case-by-case basis that differ from this presentation where appropriate. Any decisions regarding compliance at a particular facility will be made based on the application of the statute and regulations. References or links to information cited throughout this presentation are subject to change. Rule provisions and internet addresses provided in this guidance are current as of August 2018. This presentation may be revised periodically without public notice.
Part I: Introduction to the SPCC Rule
Oil Regulations

• 40 CFR part 112 - Oil Pollution Prevention regulation
  – Specifies requirements for prevention of, preparedness for, and response to oil discharges
    • Spill Prevention, Control, and Countermeasure (SPCC)
  – Includes requirements for Facility Response Plans (FRPs)

• 40 CFR part 110 – Discharge of Oil (sheen rule)
  – Prohibition of oil discharge
  – Reporting requirements
  – Establishes harmful quantity

1. Purpose of SPCC Rule
Purpose of SPCC Rule

- Requirements help prevent oil discharges from reaching navigable waters or adjoining shorelines.
- Certain facilities are required to develop SPCC Plans that describe equipment, workforce, procedures, and training to prevent, control, and provide adequate countermeasures to a discharge of oil.
- Promulgated under the authority of the Clean Water Act (CWA) §311(j)(1)(C).
What does the SPCC rule require?

- Requires facilities to develop and implement a site-specific SPCC Plan to address:
  - Containment and procedures to prevent oil discharge (tank testing);
  - Control measures to keep an oil discharge from entering navigable waters (containment); and
  - Countermeasures to contain, clean up, and mitigate any oil discharge that affects navigable waters (spill response measures).

- Performance-based rule designed to implement the Congressional policy of “no oil discharges” to waters of the United States
1.2.5 Amendments to Streamline the Rule

The guidance now summarizes these events in SPCC rule history.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Notices of Data Availability (September 20, 2004)</td>
</tr>
<tr>
<td>2005</td>
<td>Rule Proposal (December 12, 2005)</td>
</tr>
<tr>
<td>2006</td>
<td>Final Rule (December 26, 2006)</td>
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<tr>
<td>2007</td>
<td>Rule Proposal (October 15, 2007)</td>
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<tr>
<td>2008</td>
<td>Final Rule (December 5, 2008)</td>
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<tr>
<td>2009</td>
<td>Modifications finalized (November 13, 2009)</td>
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<tr>
<td>2010</td>
<td>Effective date for 2008 and 2009 final rules (January 14, 2010)</td>
</tr>
<tr>
<td>2011</td>
<td>Final Rule to exempt milk and milk product containers (April 18, 2011)</td>
</tr>
</tbody>
</table>
1.2.6 Compliance Date Amendments

- EPA extended the compliance dates for facilities to update (or for new facilities to prepare) and implement an SPCC Plan
  - Eight times, 2003-2011
  - Guidance summarizes each of these extensions.
- New production facilities have six months to develop and implement their SPCC Plan
- **All compliance dates are in the past.**
  - If the owner or operator of a facility does not have an SPCC Plan, must develop a Plan immediately.
  - Plan must comply with all amendments to the rule.

<table>
<thead>
<tr>
<th>All other facilities starting operation...</th>
<th>Must...</th>
</tr>
</thead>
<tbody>
<tr>
<td>On or before August 16, 2002</td>
<td>Maintain its existing SPCC Plan Amend and implement the amended SPCC Plan no later than November 10, 2011</td>
</tr>
<tr>
<td>After August 16, 2002 through November 10, 2011</td>
<td>Prepare and implement an SPCC Plan no later than November 10, 2011</td>
</tr>
<tr>
<td>After November 10, 2011 (excluding oil production facilities)</td>
<td>Prepare and implement an SPCC Plan before beginning operations</td>
</tr>
<tr>
<td>After November 10, 2011 (oil production facilities)</td>
<td>Prepare and implement an SPCC Plan within six months after beginning operations.</td>
</tr>
</tbody>
</table>
1.3.1 Rule Organization

• The Oil Pollution Prevention regulation (40 CFR part 112)
  – Four subparts:
    • Subparts A, B, and C: “SPCC rule”
    • Subpart D: “FRP rule”
  – Appendices
1.3.8 Summary of Milk Container Exemption

• On April 18, 2011, EPA exempted milk and milk product containers, associated piping, and appurtenances.

• The capacity of the exempt containers, piping and appurtenances is excluded from the calculation of a facility’s total oil storage capacity when determining SPCC rule applicability.

• This exemption is addressed in Section 2.8.11.
SPCC Guidance

• EPA issued Version 2.0 of the SPCC guidance on **August 28, 2013**

• This presentation focuses on the **substantive** changes since the previous version.

This presentation is not intended to serve as training on the entire SPCC rule, but rather focuses on the new or revised content and structure of the Guidance.
Guidance Document Chapters

- Chapter 1: Introduction
- Chapter 2: SPCC Rule Applicability
- Chapter 3: Environmental Equivalence
- Chapter 4: Secondary Containment and Impracticability Determinations
- Chapter 5: Oil/Water Separators
- Chapter 6: Facility Diagram and Description
- Chapter 7: Inspection, Evaluation, and Testing
- Index

*Chapters that have been revised are shown in blue*
Appendices

A. Text of CWA 311(j)(1)(c)
B. Text of Selected Regulations
C. Summary of Revised Rule Provisions
D. Sample Bulk Storage Facility SPCC Plan
E. Sample Production Facility SPCC Plan
F. Sample Contingency Plan
G. SPCC Inspection Checklists
H. Other Policy Documents

Appendices that have been revised are shown in blue
Part II: Applicability
SPCC Rule Applicability

The SPCC rule applies to a facility that meets the following criteria:

1. Drills, produces, gathers, stores, processes, refines, transfers, distributes, uses, or consumes oil and oil products; and
2. Is non-transportation-related (i.e. facility is not exclusively covered by DOI or DOT); and
3. Can reasonably be expected to discharge oil in quantities that may be harmful into or upon the navigable waters of the U.S. or adjoining shorelines; and
4. Meets capacity thresholds
   - Aboveground storage > 1,320 gallons; or
   - Completely buried storage > 42,000 gallons

§112.1
Changes to “Facility” Definition

• The 2008 Amendments revise the definition of facility to:
  – clarify that the definition of facility alone governs SPCC applicability
  – clarify that non-contiguous parcels may be considered separate facilities
  – include terms “property”, “parcel”, and “lease” and to clarify what can be used in determining facility boundaries
    • These are terms that are familiar to production and farm sectors
  – add the qualifier “oil” before the term “waste treatment”
2.4.1 Definition of Facility

- Definition of “facility” was amended in 2008.
- The definition governs the overall applicability of 40 CFR part 112, and is used to determine a facility’s boundaries to determine if the facility is subject to SPCC and/or FRP.
- Definition now clarifies that contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities.

§112.2

Facility means any mobile or fixed, onshore or offshore building, property, parcel, lease, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and oil waste treatment, or in which oil is used, as described in Appendix A to this part. The boundaries of a facility depend on several site-specific factors, including but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and types of activity at the site. Contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities. Only this definition governs whether a facility is subject to this part.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.4.2 Onshore & Offshore Facilities

• EPA regulates non-transportation-related *onshore* and *offshore* facilities.
• Both terms are defined in §112.2.
• Some facilities may be comprised of both onshore and offshore components.
  – Considered “hybrid” facilities.
  – Subject to more than one set of requirements under either Subpart B or C of the rule.
2.4.3 Definition of Production Facility

- A production facility is a type of “facility.”
- “Production facility” is separately defined in §112.2.
  - The definition is narrower than the definition of “facility” and is used to determine which sections of the rule may apply at a particular facility.
- A production facility is involved with producing or extracting petroleum crude oil from a reservoir, and not any other type of oil production, such as animal fat and vegetable oil (AFVO) production.

§112.2

*Production facility* means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or intra-facility gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil (including condensate) and associated storage or measurement and is located in an oil or gas field, at a facility. This definition governs whether such structures, piping, or equipment are subject to a specific section of this part.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.4.4 Drilling and Workover Facilities

- Considered mobile facilities.
  - Typically develop an SPCC Plan under §112.3(c).
- Rule requirements apply:
  - Administrative and general requirements (§§112.1 through 112.7)
  - Specific requirements in §112.10 (for onshore facilities) or §112.11 (for offshore facilities)
- When drilling and/or workover activities cease and production has begun, the facility is considered an oil production facility.
- Workover activities are a distinct operation and may be conducted by a separate owner or operator.
2.4.5 Definition of Farm

• The definition of “farm” is narrower than the definition of “facility.”

• Promulgated in 2006 to identify facilities subject to a compliance date extension.

• The definition of “facility” governs overall rule applicability.
  – Used to determine whether the farmer is subject to the rule
  – Used to determine the scope of his or her facility

§112.2

Farm means a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.4.6 Aggregation or Separation

- Example factors to determine the boundaries of a facility:
  - Ownership, management, and operation of the buildings, structures, equipment, installations, pipes, or pipelines on the site;
  - Similarity in functions, operational characteristics, and types of activities occurring at the site;
  - Adjacency; or
  - Shared drainage pathways (e.g., same receiving water bodies)
- An owner or operator may not characterize a facility so as to simply avoid applicability of the rule.
- Guidance provides six example scenarios of how a facility owner or operator may determine what is considered a “facility” for the purposes of an SPCC Plan.
2.4.7 Natural Gas Facilities and Pipelines

- Containers storing condensate must be included in a natural gas facility’s total oil storage capacity calculation.
  - Ancillary oil storage in other areas of the facility, such as fuel or lubrication oil, and oil-filled equipment, is also counted.
- Equipment that compresses or pumps the natural gas is not regulated
  - unless there is oil-filled operational equipment that meets the applicability requirements of the rule.
- The Guidance provides five example scenarios of facilities that are involved in producing or treating natural gas and how the SPCC rule would apply for each.
2.4.7 Scenario A: Oil & Gas Production Facility

- The wellhead produces a mixture of oil, gas, and produced water.
  - Because this facility produces oil from the wellhead, it is an oil production facility and must comply with the requirements at §112.9.
  - Dual-phase flowlines and intra-facility gathering lines (carrying both gas and liquid phase hydrocarbon) are subject to SPCC.
  - Intra-facility gathering lines subject to DOT regulation are exempt from SPCC rule requirements.
2.4.7 Scenario B: “Wet Gas” Production Facility

- The wellhead produces a mixture of gas, produced water, and condensate.
  - Liquid condensate is considered oil.
  - Because the facility produces oil, this facility is considered an oil production facility and must comply with the requirements at §112.9.
  - The presence of gas treatment would not affect the determination that this facility is an oil production facility.
2.4.7 Scenario C: “Dry Gas” Production Facility

• The wellhead at this facility produces a mixture of gas and produced water only – no condensate or crude oil.
  – Does not meet the description of an “oil production, oil recovery, or oil recycling facility.”
  – May be eligible for the wastewater treatment exemption under §112.1(d)(6).

• If aboveground ancillary storage of oil is greater than 1,320 U.S. gallons, and the facility otherwise meets applicability, the facility is regulated under SPCC.
  – Must comply with the requirements at §112.8 (not considered an oil production facility).
2.4.7 Scenario D: Gas Processing/Treatment

- Receives gas after it is separated from oil and produced water.
  - Gas typically contains condensate, which is removed at this facility.
- If the aboveground storage capacity for condensate tanks and other ancillary oil storage is greater than 1,320 gallons, and the facility otherwise meets applicability, then this facility is regulated under SPCC.
  - Must comply with requirements under §112.8 (considered a bulk storage facility)
- When these activities are co-located at an oil production facility, then oil containers are considered part of the oil production facility operations.
  - Subject to the onshore oil production facility requirements under §112.9 (or §112.11 for offshore facilities).
2.4.7 Scenario E: Gas Pipeline Facility

- Facility supports a gas pipeline.
  - **Compressors or equipment containing oil** (including condensate) are regulated.
  - Gas-filled portions of equipment are not regulated.

- If the aboveground oil storage capacity is greater than 1,320 gallons, and the facility otherwise meets applicability, then this facility is regulated under SPCC
  - Must comply with requirements under §112.8 (considered a bulk storage facility).
Drills, produces, gathers, stores, processes, refines, transfers, distributes, uses, or consumes oil and oil products.
Drilling

Criterion #1: Oil-Related Activities
Producing

Criterion #1: Oil-Related Activities
Gathering

Criterion #1: Oil-Related Activities
Criterion #1: Oil-Related Activities
Processing

Criterion #1: Oil-Related Activities
Refining

Criterion #1: Oil-Related Activities
Transferring

Criterion #1: Oil-Related Activities
Distributing

Criterion #1: Oil-Related Activities
Criterion #1: Oil-Related Activities
Consuming

Criterion #1: Oil-Related Activities
Drills, produces, gathers, stores, processes, refines, transfers, distributes, uses, or consumes oil and oil products.
2.2 Definition of Oil

• The SPCC rule applies to the owners and operators of facilities with the potential to discharge oil in quantities that may be harmful to navigable waters or adjoining shorelines.

• The definition of oil at §112.2 has not changed.

• This section was reorganized and expanded to provide information on the applicability of various substances.

§112.2

*Oil* means oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.2.1 Petroleum Oils & Non-Petroleum Oils

- SPCC rule applies to both petroleum oils and non-petroleum oils. Terms are defined in §112.2.
  - **Petroleum oils** include crude and refined petroleum products, asphalt, gasoline, fuel oils, mineral oils, naphtha, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.
  - **Non-petroleum oils** and greases include coal tar, creosote, silicon fluids, pine oil, turpentine, and tall oils.
- Both petroleum and non-petroleum oils can enter all parts of an aquatic system and adjacent shoreline.
- Similar methods of containment, removal, and cleanup are used to reduce the harm created by spills of both types of oils.

**§112.2**
2.2.2 Synthetic Oils

- Used in a wide range of applications, including:
  - as heat transfer fluids
  - engine fluids
  - hydraulic and transmission fluids
  - metalworking fluids
  - dielectric fluids
  - compressor lubricants
  - turbine lubricants

- Created by chemical synthesis rather than by refining petroleum crude or extracting from plant seeds.

- Not defined in §112.2
2.2.3 Animal Fats & Vegetable Oils

• **Animal fats** include fats, oils, and greases of animal (including fish or marine mammal) origin.
  – Examples: lard, tallow, cod liver oil, whale oil

• **Vegetable oils** include oils of vegetable origin, including oils from seeds, nuts, fruits, and kernels.
  – Examples: corn oil, rapeseed oil (canola oil), coconut oil, palm oil, soy bean oil, sunflower seed oil, cottonseed oil, and peanut oil.

• Terms are defined in §112.2.
2.2.4 Asphalt

- All types of asphalt are petroleum oil products.
- SPCC rule applies to asphalt cement (AC), and to asphalt derivatives such as cutbacks and emulsions.
- Hot-mix asphalt (HMA) is a blend of AC and aggregate material, which is formed into final paving products for use on roads and parking lots.
  - Unlikely to flow as a result of the entrained aggregate
- **HMA and HMA containers are exempt** from the SPCC rule.
2.2.5 Natural Gas and Condensate

• The SPCC rule does not apply to natural gas (including liquid natural gas and liquid petroleum gas).

• Natural gas liquid condensate (often referred to as “natural gasoline” or “drip gas”) is an oil subject to the SPCC rule.
  – Condensate can accumulate in tanks, containers, or other equipment.
  – For the purposes of determining SPCC applicability, containers with 55 gallons or more in capacity storing condensate must be included in a facility’s total oil storage capacity calculation.
2.2.6 Oil and Water Mixtures

- Oil and water mixture containers are subject to the SPCC rule.
- A mixture of wastewater and oil is “oil.”
- A discharge of wastewater containing oil to navigable waters or adjoining shorelines in a harmful quantity is prohibited.
- One example of an oil and water mixture is produced water.
2.2.7 Produced Water

- Produced water is the oil and water mixture resulting from the separation of crude oil or gas from the fluids or gases extracted from the oil/gas reservoir, prior to disposal, subsequent use or further treatment.

- **SPCC rule applies to produced water.**
  - The capacity of produced water containers counts toward the facility aggregate oil storage capacity.

- Produced water containers are not eligible for the wastewater treatment exemption in §112.1(d)(6).

- “Produced water container” is defined at §112.2.

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**§112.2**

*Produced water container* means a storage container at an oil production facility used to store the produced water after initial oil/water separation, and prior to reinjection, beneficial reuse, discharge, or transfer for disposal.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.2.8 Hazardous Substances and Hazardous Waste

- Hazardous substances that are oils, or mixed with oils, are subject to SPCC rule requirements.
  - For example, benzene is a constituent of gasoline

- Containers storing these substances may also be covered by other regulations, such as RCRA or CERCLA.

- Inspectors should evaluate whether containers storing hazardous substances or mixtures of wastes contain oil.

- Hazardous substances or hazardous wastes that are neither oils nor mixed with oils are not subject to SPCC rule requirements.
2.2.9 Denatured Ethanol

- Ethanol used for fuel often contains a denaturing additive (typically gasoline, natural gasoline, diesel fuel or other oil petroleum product) which is oil.
- Therefore, the final denatured ethanol is considered an oil.
- Facilities handling or storing denatured ethanol may be subject to SPCC.
- An EPA letter dated November 7, 2006 details the Agency’s position on denatured ethanol – see Appendix H of guidance.
2.2.10 Biodiesel and Biodiesel Blends

- Biodiesel is a fuel for diesel engines derived from natural oils like soybean oil.
- Biodiesel blends are a blend of biodiesel fuel with petroleum-based diesel fuel.
- Both biodiesel and biodiesel blends are considered oil for the purposes of SPCC.
Facility is non-transportation-related.

(It is not exclusively regulated by DOI or DOT.)
2.5 “Non-transportation-Related”

• Facilities are divided into three categories:
  – Transportation-related facilities (DOT)
  – Non-transportation-related facilities (EPA)
  – Complexes (dual jurisdiction)

• EPA’s jurisdictional authority is detailed in a series of Executive Orders and Memoranda of Understanding

• The guidance contains scenarios that have raised jurisdictional questions

• Inspectors should evaluate the intended activity carefully because the determination of jurisdiction is not always straightforward.
Non-Transportation Related Facilities
(EPA Jurisdiction)

- Fixed or mobile onshore and offshore oil drilling and production facilities
- Oil refining and storage facilities
- Industrial, commercial, agricultural, and public facilities that use and store oil
- Waste treatment facilities
- Loading racks, transfer hoses, loading arms, and other equipment used to transfer oil in bulk to or from highway vehicles or railroad cars
- Highway vehicles, railroad cars, and pipelines used to transport oil within confines of non-transportation-related facility

Criterion #3: Non-Transportation Related
Transportation Related Facilities
(DOT Jurisdiction)

• Onshore and offshore terminal facilities, including transfer hoses, loading arms, and other equipment used to transfer oil in bulk to or from a vessel, including storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels

• Transfer hoses, loading arms, and other equipment appurtenant to a non-transportation-related facility used to transfer oil in bulk to or from a vessel

• Interstate and intrastate onshore and offshore pipeline systems

• Highway vehicles and railroad cars that are used for the transport of oil

Criterion #3: Non-Transportation Related
Complexes
(EPA and DOT Jurisdiction)

- A facility with both transportation-related and non-transportation-related activities is a “complex facility” and is subject to the dual jurisdiction of EPA and DOT.
Can reasonably be expected to discharge oil in quantities that may be harmful into or upon the *navigable waters* of the U.S. or adjoining shorelines
Definition of “Discharge” (at §112.2)

- Includes any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of any amount of oil *no matter where it occurs*
  - Excludes certain discharges associated with §402 of the CWA and §13 of the River and Harbor Act of 1899
Discharge as described in §112.1(b)

- Refers to quantities that may be harmful, as described in 40 CFR part 110 ("sheen rule")
  - Discharge violates applicable water quality standards; or
  - Discharge causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon the adjoining shorelines

- Includes discharges harmful not only to public health or welfare, but also to the environment

Criterion #4: Discharge in Harmful Quantities

§112.1(b)
...so what’s the difference?

- A discharge as described in §112.1(b) is a violation of Section 311 of the Clean Water Act
  - Reportable to NRC and may trigger SPCC reporting requirements
  - May impact ability to self certify an SPCC plan
- A §112.2 discharge that does not impact a navigable water or adjoining shoreline (e.g., a spill into a dike or other secondary containment structure) is not a violation of Section 311 of the Clean Water Act
  - Not reportable to the NRC under the 40 CR part 110
  - May trigger certain SPCC requirements to remove oil
  - However may be a violation or reportable under State or local regulatory requirements

Criterion #4: Discharge in Harmful Quantities
Discharge Types
“Reasonable Expectation” of Discharge

• This determination must be based solely upon consideration of the geographical and locational aspects of the facility

• Must exclude manmade features such as dikes, equipment or other features which would restrain, hinder, contain or otherwise prevent a discharge as described in §112.1(b)
“Reasonable Expectation” of Discharge

• Factors an owner operator may consider (SPCC Guidance):
  – Whether a past discharge of oil reached a navigable water or adjoining shoreline;
  – Whether the facility is adjacent to navigable waters;
  – On-site conduits, such as sewer lines, storm sewers, certain underground features (e.g., power or cable lines, or groundwater);
  – Unique geological or geographic features;
  – Whether the facility is near a watercourse and intervening natural drainage;
  – Whether precipitation runoff could transport oil into navigable waters; and
  – The quantity and nature of oil stored.
Waters of the United States (WOTUS) Status

- On June 29, 2015, Final WOTUS rule was published in FR, defining the scope of protected waters under the CWA. Effective date of the rule was Aug. 28, 2015.

- On October 9, 2015, the U.S. Court of Appeals for the Sixth Circuit stayed the 2015 WOTUS Rule nationwide pending further action of the court. Note: On Jan. 22, 2018, SCOTUS issued an opinion on venue for 2015 WOTUS rule litigation; district courts are the proper venue.

- On February 28, 2017, President Trump issued an Executive Order (E.O. 13778) directing EPA and the U.S. Army Corps of Engineers to review and then rescind or revise the 2015 Clean Water Rule: Definition of “Waters of the United States”.

- EPA and U.S. Army Corps of Engineers published a proposed rule on July 27, 2017 to rescind the 2015 WOTUS rule and return to status quo prior to the 2015 rule (known as Step 1). A supplemental Step 1 proposal was published on July 12, 2018; comments are due by August 13, 2018.
WOTUS Status, cont’d

- EPA and U.S. Army Corps of Engineers published a proposed rule on November 22, 2017 to extend the applicability date of the 2015 rule by two years from the date of the final action on this proposal (known as Step 0). This final rule was published in the FR on February 6, 2018; applicability date has been extended to February 6, 2020.

- EPA and U.S. Army Corps of Engineers are working on a proposed rule in response to the Feb. 28 E.O. 13778; this action is known as Step 2. EPA and Corps of Engineers anticipate publication of a proposed rule by Fall 2018.

- View the Executive Order and related Federal Register Notices: https://www.epa.gov/wotus-rule

- For the SPCC and FRP programs, the 1973 definition represents status quo.
The term “navigable waters” includes:

1) All navigable waters of the United States, as defined in judicial decisions prior to the passage of the 1972 Amendments of the Federal Water Pollution Control Act (Pub. L. 92-500) also known as the Clean Water Act (CWA), and tributaries of such waters;

2) Interstate waters;

3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.
Applicability Criterion #5

Meets storage capacity thresholds
Definition of Storage Capacity

- Storage capacity of a container means the shell capacity of the container.
- If a certain portion of a container is incapable of storing oil because of its integral design, then the storage capacity is the volume the container might hold.
- The shell capacity is the rated design capacity rather than the working/operational capacity.
2.7.2 Definition of Storage Capacity

- Industry standards for certain storage tanks define the storage capacity of the tank as the physical capacity of the shell to contain liquid.
- Many aboveground field erected tanks have cone-down bottoms; this volume is included in the overall storage capacity of the tank.
- Devices such as hydraulic overfill valves or high level alarms or procedures are not a means of limiting the capacity of a storage container.

§112.2

Storage capacity of a container means the shell capacity of the container.

Note: The above text is an excerpt of the SPCC rule. Refer to 40 CFR part 112 for the full text of the rule.
2.7.3 Tank Re-rating

- An owner or operator may reduce the capacity of a tank by:
  - Changing the shell dimensions
    - E.g., removing shell plate sections, or installing a double bottom
    - Permanently installing overflow ports or vents
- Alterations must be performed in accordance with applicable industry standards.
- Alterations require a technical amendment to the SPCC Plan certified by a PE.
Evaluating Tank Re-Rating Alterations

• Overflow ports can be a simple opening(s) (i.e. eyebrow vents) cut in the shell or a new nozzle(s).

Note: The hole drilled in the shell appears too small

What design considerations would you want to think about with this type of alteration?
Evaluating Tank Re-Rating Alterations

What records should the EPA inspector look for?

– Documentation from a PE that the overflow port is sized based on filling the tank (i.e., fill rate) without substantially increasing the liquid level above the bottom of the overflow opening and is in accordance with API 653 Inspections.

– The author of the SPCC Plan must change the SPCC Plan to reclassify the container volume and the PE who certifies the SPCC Plan must sign an amendment to the SPCC plan that the modifications to the tank to install overflow ports were done in accordance with industry standards and state what standard was used (API 653 for example).

– Documentation in the owner/operator records on what modifications were made and when and maximum liquid level.

– Records that the overflow port was inspected by an API 653 certified inspector or reviewed by tank engineer.

– Documentation on materials, welding procedure, examinations, and testing methods.
Critical physical items to look for:

- Overflow is open (i.e. not over-ridden by a valve, or other means that closes the opening)
- Is the overflow away from shell welds?
- If the overflow port is a nozzle, the nozzle must have a reinforcing plate or be installed with a thickened insert plate.
- If overflow nozzle has an overflow pipe, check that it is supported from the shell.
- The tank should have a new nameplate indicating modifications made, date, and maximum liquid level. NOTE: API Section 13 covers requirements for nameplates for reconstructed tanks and tanks without nameplates. API 653 contains no requirement to provide nameplates for altered tanks.
Tank Re-Rating Examples

- Tank with overflow nozzle and overflow pipe

What design considerations would you want to think about with this type of alteration?
Tank Re-Rating Examples

• Tank with overflow nozzle and overflow pipe. Items to look for:
  – The overflow pipe has no valves (is open-ended) and discharges into the containment.
  – The overflow pipe is supported from the shell.
  – The overflow pipe has an inverted siphon near the bottom of the tank which is filled with glycol to prevent vapor emissions. (Note: this is not typically done, but is acceptable)

Inverted siphon
Tank Re-Rating Examples

• Caution: Things may not be what they appear. The pipe on the exterior of the tank is not an overflow pipe; it is the fill pipe.
Thresholds

- SPCC rule applies to a facility with greater than:
  - 1,320 gallons of aggregate aboveground oil storage capacity, or
  - 42,000 gallons of completely buried oil storage capacity

Criterion #5: Storage Capacity

§112.1(d)
SPCC rule exempts any oil storage container that is permanently closed.

*Permanently closed* means any container or facility for which:

- (1) All liquid and sludge has been removed from each container and connecting line; and
- (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is permanently closed and noting the date of closure.

Definition of “permanently closed” does not require a container to be removed from a facility.

- Permanently closed containers may be brought back into use as needed for variations in production rates and economic conditions.

Permanent closure requirements under the SPCC rule are separate and distinct from the closure requirements in regulations promulgated under Subtitle C of RCRA.

Preamble regarding new containers never containing oil
Exemptions to SPCC Applicability

• Current exemptions to the SPCC rule include
  – Underground storage tanks subject to UST tech requirements
  – Wastewater treatment facilities
  – Motive power containers

• Exemptions in the 2008 amendments include
  – Hot-mix asphalt (HMA)
  – Residential heating oil containers (ASTs and USTs)
  – Pesticide application equipment
  – USTs at nuclear power generation facilities
  – Intra-facility gathering lines subject to the requirements of 49 CFR part 192 or 195
Underground Storage Tanks

- SPCC rule exempts:
  - Underground storage tanks that are completely buried and regulated under 40 CFR 280 and 281
  - Connected underground piping
  - Underground ancillary equipment and containment systems

When such tanks are subject to all of the technical requirements of 40 CFR part 280 or a state program approved under 40 CFR part 281

- These tanks must still be marked on the facility diagram if the facility is otherwise subject to the SPCC rule (§112.7(a)(3))
Wastewater Treatment Exemption

• Excludes from the SPCC requirements:
  – Facilities or parts of facilities that are used exclusively for wastewater treatment, and that are not used to meet 40 CFR part 112 requirements

• Does not exclude:
  – Production, recovery, or recycling of oil
  – A wastewater treatment facility or part thereof that is used:
    • To store oil
    • To meet a 40 CFR part 112 requirement (e.g., general secondary containment)
Motive Power

- Any onboard bulk storage container used primarily to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment.

- An onboard bulk storage container which is used to store or transfer oil for further distribution is not a motive power container.
Motive Power Containers

- Motive power containers are exempted from SPCC rule
- Oil transfer activities occurring within an SPCC-regulated facility continue to be regulated
  - Transfer of oil from an otherwise SPCC regulated facility’s AST gas pump into an automobile
  - Transfer of oil from an otherwise SPCC regulated facility’s airport mobile refueler into an airplane

§112.1(d)(2)(ii) and (d)(7)
Motive Power (continued)

• Examples of motor vehicles that have motive power containers:
  – Aircraft,
  – Self-propelled cranes,
  – Self-propelled aviation ground service equipment vehicles,
  – Self-propelled heavy vehicles (e.g., used in forestry, agricultural, mining, excavation and construction applications), and
  – Locomotives.

• Ancillary on-board equipment includes:
  – Hydraulic and lubrication operational oil-filled containers used for other ancillary functions of a motor vehicle
  – Heaters, air conditioning units, and electrical power generation, etc.

• Oil drilling and workover equipment (including rigs) are specifically excluded from the definition of a motive power container.
Hot-Mix Asphalt

- Hot-Mix Asphalt (HMA) and HMA containers are exempt from the SPCC rule.
  - Includes general rule applicability and capacity calculation requirement
- HMA is unlikely to reach navigable waters or adjoining shorelines.
  - EPA never intended HMA to be included as part of a facility’s SPCC Plan
- The RA would continue to have the authority to require an SPCC Plan, if necessary.
Pesticide Application Equipment

- Pesticide application equipment and related mix containers are exempt.
- Pesticide application equipment includes:
  - Ground boom applicators
  - Airblast sprayers,
  - Specialty aircraft that are used to apply measured quantities of pesticides to crops and/or soil.
  - Related mix containers
- Related mix containers are those used to mix pesticides with water and, as needed, adjuvant oils, just prior to loading into application equipment.

§112.1(d)(2) and (10)
Residential Heating Oil

• Residential heating oil containers at single-family residences are exempt from the SPCC rule.
  – Includes general rule applicability and capacity calculation requirement

• Applies to containers that are:
  – Aboveground or completely buried
  – Located at a farm or other single-family residences
  – Used solely to store heating oil used to heat the residence

• SPCC requirements continue to apply to oil containers used to heat other non-residential buildings within a facility.

§112.1(d)(2) and (9)
Underground Storage Tanks at Nuclear Power Generation Facilities

- EPA is exempting USTs that:
  - are deferred under 40 CFR part 280,
  - supply emergency diesel generators at nuclear power generation facilities licensed by Nuclear Regulatory Commission (NRC), and
  - meet the NRC design criteria and quality assurance criteria.

- This exemption includes both tanks that are completely buried and tanks that are below-grade and vaulted (but can’t be visually inspected).

- NRC sets certain criteria to cover the design, fabrication, installation, testing and operation of structure, systems, and components.
  - Requirements may be similar or more stringent than those associated with the SPCC rule.

- Certain actions necessary to comply with SPCC rule could be impracticable at NRC facilities.

- This exemption was finalized in 2008, and the 2009 amendment made technical corrections to the language related to this exemption.
2.10 SPCC Applicability for Different Types of Containers

• This section of the guidance describes how the rule applies to specific types of containers.
• Updated and expanded for completeness and to include additional exemptions resulting from recent rule amendments, notably:
  – Double-walled or vaulted tanks
  – Oil-filled operational equipment
  – Oil-powered generators
  – Bulk storage containers at tank battery, separation and treating areas
2.10.2 Double-walled or Vaulted Tanks

- Double-walled tanks are essentially a tank within another tank.
  - Equipped with an interstitial space
  - Constructed in accordance with industry standards
- Inner tank serves as the primary oil storage container while the outer tank serves as secondary containment.
- The outer tank may provide adequate secondary containment for discharges resulting from leaks or ruptures of the entire capacity of the inner storage tank.
- According to the memo referenced in the guidance:
  - The interstice must be able to be inspected in order to meet the SPCC requirements
- See Sections 4.4.5 and 7.5.1 for more information on secondary containment and inspection requirements
4.4.5 Double-walled or Vaulted Tanks or Containers

Summary of Required Elements from the Double-walled Tank Memos:

• The use of certain shop-built double-wall ASTs serve as an “equivalent” preventive system for purposes of the general secondary containment requirements of §112.7(c) when they include the following elements:
  – Containers are shop fabricated;
  – The inner tank is an Underwriter Laboratories (UL)-listed steel tank;
  – The outer tank is constructed in accordance with nationally accepted industry standards;
  – Equipped with the following overfill prevention measures to contain overfills from tank vents:
    • Overfill alarm and
    • Automatic flow restrictor or flow shut-off; and
  – All product transfers are constantly monitored.
4.4.5 Double-walled or Vaulted Tanks or Containers

Other Applicable Secondary Containment Requirements

• Shop-fabricated double-wall ASTs may satisfy the requirements of §112.7(c) and §112.8(c)(2) for the bulk storage container
• HOWEVER it may not provide adequate secondary containment to address transfer-related overfills from the tank vent.
  – Active secondary containment measures may be used
• Any piping, equipment, or device not contained within a double-walled AST is subject to §112.7(c).
• If facility drainage system will be used to comply with secondary containment then the piping, equipment or device is also subject to requirements of §112.8(b) or §112.12(b).

The inner tank of the double-walled tank must be inspected to comply with 112.8(c)(6) inspection requirements. This is addressed in more detail in section 7.5.1.
2.10.4 Oil-filled Operational Equipment

- “Oil-filled operational equipment” is defined under §112.2 as equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device.
- Not considered a bulk storage container.
- Does not include oil-filled manufacturing equipment (flow-through process).
- Secondary containment alternative for oil-filled operational equipment is found at §112.7(k) (discussed later).
2.10.6 Oil-powered Generators ("Gen-sets")

• Combination of oil-filled operational equipment and a bulk oil storage container.
• Newer designs of gen-sets provide for a double-walled tank for the bulk oil storage container.
  – May meet sized and general containment requirements for the bulk storage container,
• The oil-filled operational equipment must
  – be provided with secondary containment (§112.7(c)) or
  – provide alternative measures as provided for qualified oil-filled operational equipment in §112.7(k).
2.10.7 Bulk Storage Containers at Tank Battery, Separation, and Treating Areas

- An oil production facility tank battery includes separation and treating equipment, a crude oil or condensate container (oil stock tank), drums of oil-based products and typically a produced water container.

- Bulk storage containers at oil production facilities must be:
  - Compatible with the materials stored and condition of storage;
  - Provided with secondary containment sized for the largest single container and sufficient freeboard;
  - Visually inspected periodically and upon a regular schedule; and
  - Engineered in accordance with good engineering practice to prevent discharges.
Is the facility, or part of the facility, considered non-transportation-related?

Is the facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil?

Could the facility be expected to discharge oil in quantities that may be harmful into navigable waters or adjoining shorelines?

Is the total aggregate capacity of aboveground oil storage containers greater than 1,320 gallons?

Do not include containers with a capacity less than 55 gallons, permanently closed containers, storage containers used exclusively in wastewater treatment, hot mix asphalt or hot-mix asphalt containers, pesticide application equipment and related mix containers, residential heating oil containers, or milk and milk product containers.

Is the total aggregate capacity of completely buried storage tanks greater than 42,000 gallons?

Do not include completely buried tanks subject to all of the technical requirements of 40 CFR part 280 or 40 CFR part 281, underground oil storage tanks that supply emergency diesel generators at a nuclear power stations, permanently closed containers, and single family residential heating oil containers.

The facility IS subject to SPCC

The facility IS NOT subject to SPCC
Part III: SPCC Requirements Overview
§112.3 Prepare and Implement a Plan

• The facility owner/operator must prepare an SPCC Plan:
  – In writing
  – In accordance with §112.7 and any other applicable sections of 40 CFR part 112

• Compliance dates to prepare, amend, and implement an SPCC Plan
1.2.6 Compliance Date Amendments

- EPA extended the compliance dates for facilities to update (or for new facilities to prepare) and implement an SPCC Plan
  - Eight times, 2003-2011
  - Guidance summarizes each of these extensions.
- New production facilities have six months to develop and implement their SPCC Plan
- **All compliance dates are in the past.**
  - If the owner or operator of a facility does not have an SPCC Plan, must develop a Plan immediately.
  - Plan must comply with all amendments to the rule.

<table>
<thead>
<tr>
<th>All other facilities starting operation...</th>
<th>Must...</th>
</tr>
</thead>
<tbody>
<tr>
<td>On or before August 16, 2002</td>
<td>Maintain its existing SPCC Plan Amend and implement the amended SPCC Plan no later than November 10, 2011</td>
</tr>
<tr>
<td>After August 16, 2002 through November 10, 2011</td>
<td>Prepare and implement an SPCC Plan no later than November 10, 2011</td>
</tr>
<tr>
<td>After November 10, 2011 (excluding oil production facilities)</td>
<td>Prepare and implement an SPCC Plan before beginning operations</td>
</tr>
<tr>
<td>After November 10, 2011 (oil production facilities)</td>
<td>Prepare and implement an SPCC Plan within six months after beginning operations</td>
</tr>
</tbody>
</table>
Mobile Facilities

- Onshore and offshore mobile facilities must prepare, implement, and maintain a Plan as required by the rule
  - Amend and implement a Plan, if necessary to ensure compliance with the rule, on or before July 1, 2009
  - Can be a general Plan; a new Plan is not required each time a facility moves to a new site.
Professional Engineer Certification

- A licensed PE must review and certify a Plan and technical amendments.
- The certification does not relieve the owner/operator of his duty to prepare and fully implement a Plan.
- Qualified facilities may opt to self-certify Plans in lieu of PE-certification.
  - This will be discussed during the overview of 112.6.
  - Some states do not allow self-certification of SPCC Plans.

Prepare and Implement a Plan

§§112.3(d) and 112.5(c)
PE Attestation

• In the certification, the PE attests that:
  – He is familiar with the rule requirements
  – He or his agent visited and examined the facility
  – The Plan has been prepared in accordance with good engineering practice, including the consideration of applicable industry standards, and with the requirements of 40 CFR part 112
  – Procedures for required inspections and testing have been established
  – The Plan is adequate for the facility
  – If applicable, for a produced water container subject to §112.9(c)(6), any procedure to minimize the amount of free-phase oil is designed to reduce the accumulation of free-phase oil and the procedures and frequency for required inspections, maintenance and testing have been established and are described in the Plan.
PE Attestation (continued)

- PEs do not need to be licensed in the state in which the facility is located for Federal compliance
- State’s may have laws that require a PE to be licensed in the state and may prohibit self certification
- PEs can be employees of the facility
Plan Location

- Maintain a complete copy of the Plan:
  - At the facility if it is attended at least 4 hours per day
  - At the nearest field office if the facility is attended for less than 4 hours per day

- Have the Plan available for on-site review during normal working hours
Extension Requests

• Regional Administrator (RA) may authorize extension to prepare, implement, and/or amend Plan if facility cannot fully comply with requirements
  – Non-availability of qualified personnel
  – Delays in construction or equipment delivery

• Owner/operator must submit a written extension request
  – Cause
  – Actions taken and planned to minimize delay
  – Proposed time schedule
§112.4 Amendment of SPCC Plan by Regional Administrator

**Notify Regional Administrator**

- Submit specific information to the RA if the facility discharged:
  - More than 1,000 gallons of oil in a single discharge as described in §112.1(b)
  - More than 42 gallons of oil in each of two discharges as described in §112.1(b) within a 12-month period
  - The gallon amount (42 or 1,000) refers to the amount of oil that reaches navigable waters which is reportable under 40 CFR 110

- No action necessary until one of the above triggering events
- Still required to report to NRC in accordance with 40 CFR part 110
Plan Amendment by RA

- Amend Plan as required by the RA
  - To meet the requirements of the rule
  - Prevent and contain discharges from facility

- Decision based on:
  - Review of information facility submits
  - Review of information from state agency
  - On-site review of Plan

Amendment of SPCC Plan by Regional Administrator  §112.4(d)
§112.5 Amendment of SPCC Plan by Owners or Operators

• For changes in facility design, construction, operation, or maintenance that materially affect the potential for a discharge as described in §112.1(b)
  – 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

• Amend within 6 months; implement ASAP, but no later than 6 months after amendment
Plan Review

• Complete review and evaluation of Plan
  – Once every 5 years from the date facility becomes subject to the rule
  – If a facility was in operation on or before 8/16/2002, five years from the date of your last review required by the rule
  – Does not always require a PE
• Amend Plan within 6 months to include more effective prevention and control technology
• Implement ASAP, but no later than 6 months of amendment
Documenting Plan Review

- Must document Plan review and evaluation
- Sign statement at beginning or end of Plan or in a log or an appendix
  - “I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result.”
- PE must certify any technical amendment to Plan
  - Qualified Facilities exception

Amendment of SPCC Plan by Owner or Operator §112.5(b) and (c)
§112.6 Qualified Facility Plan Requirements

- Smaller oil storage facility that is eligible for streamlined regulatory requirements
  - Self-certified SPCC Plan instead of one reviewed and certified by a Professional Engineer
- Must meet eligibility criteria to use alternative option
- 2008 amendments divided this group of facilities into tiers

This topic will be discussed further in Section IV: Focus on Qualified Facilities
Qualified Facility – An Overview

- A qualified facility is a smaller oil storage facility that is eligible for streamlined regulatory requirements
  - Self-certified SPCC Plan instead of one reviewed and certified by a Professional Engineer
  - Streamlined integrity testing requirements
  - Streamlined facility security requirements
- Must meet eligibility criteria
- EPA’s recent amendments would divide this group of facilities into tiers
  - Requirements described here would apply to “Tier II” facilities
  - Additional relief would be provided to “Tier I”
Eligibility Criterion #1: Storage Capacity

- Facility must have **10,000 gallons or less** in aggregate aboveground oil storage capacity
- Will lose eligibility if facility increases capacity > **10,000 gallons**
Eligibility Criterion #2: Reportable Discharge History

For the 3 years prior to Plan certification, or since becoming subject to the rule if it has operated for less than 3 years, the facility must not have had:

– A single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 U.S. gallons, or

– Two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 U.S. gallons within any 12-month period.
What is counted?

- When determining the applicability of this criterion, the gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil discharge that actually reaches navigable waters or adjoining shorelines, not the total amount of oil spilled.
- Oil discharges that result from natural disasters, acts of war, or terrorism are not included.
- Oil discharges that result from vandalism are included.
What if they have a spill?

- Facilities that have a reportable oil discharge after self-certifying the SPCC Plan do not automatically lose eligibility
  - However, the Regional Administrator has the authority to require a Plan amendment

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1. Tier II Eligibility Criteria #2: Reportable Discharge History

§112.3(g)(2)
How often is this determined?

** Discharge history criterion is a one-time determination! **

(A “snap shot” of a facility’s compliance history)

Facilities do not require a re-assessment of eligibility following a technical change to the Plan or 5-year review.

1. Tier II Eligibility Criteria #2: Reportable Discharge History
Self-Certification

• In lieu of a PE-certification, the owner/operator must self-certify the facility’s SPCC Plan.

• Owner/operator attests that he/she is familiar with the SPCC rule and has visited and examined the facility.
Self-Certification Attestation

- Owner/operator also certifies that:
  - The Plan has been prepared in accordance with accepted and sound industry practices and standards and with the rule requirements.
  - Procedures for required inspections and testing have been established.
  - The Plan is being fully implemented.
  - The facility meets the qualifying criteria.
  - The Plan does not deviate from rule requirements except as allowed and as certified by a PE.
  - Management approves the Plan and has committed resources to implement it.
“The Hybrid Plan”

• An owner/operator may not use environmentally equivalent measures and make impracticability determinations, – unless reviewed and certified by a PE

• This is referred to as a “hybrid” Plan
Technical Amendments

• Owner/operator may self-certify technical amendments as long as a PE has not certified the portion being changed.

• If a PE certified the affected portion of the Plan (i.e., for a hybrid Plan), then a PE must certify the technical amendment.
Tier I Qualified Facilities

- EPA’s 2008 amendments create a subset of Qualified Facilities.
  - Facilities meeting the criteria described earlier are “Tier II” qualified facilities.
  - Facilities meeting additional criterion are “Tier I” qualified facilities and are subject to further streamlined requirements.

- The 2009 rule amendments provide clarifications to the rule language associated with this set of facilities, and corrections of typographical and formatting errors in the Tier I template.
Eligibility Criteria

• Meet the Tier II qualified facility eligibility criteria:
  – 10,000 gallons or less in aggregate aboveground oil storage capacity
  – For the 3 years prior to Plan certification, or since becoming subject to the rule if it has operated for less than 3 years, the facility must not have had:
    • A single discharge of oil to navigable waters exceeding 1,000 U.S. gallons, or
    • Two discharges of oil to navigable waters each exceeding 42 U.S. gallons within any 12-month period
  - AND -
• Maximum individual oil storage container capacity of 5,000 U.S. gallons
Streamlined Requirements

- A Tier I qualified facility would have the option to complete an SPCC Plan template (in Appendix G to 40 CFR part 112) in lieu of a full SPCC Plan.
- The choice for Tier I or Tier II is optional if the qualifying criteria are met.
- The 2009 rule amendments provided corrections of typographical and formatting errors on the Tier I template, and removed language on the template associated with the provisions that were removed from the rule.
Template

- Template is designed to be a simple SPCC Plan.
  - Includes only the requirements that should apply to this tier of 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.

- Template is found in Appendix G to the SPCC rule.
Tier I Template

• Available at:
  http://www.epa.gov/osweroe1/content/spcc/tier1temp.htm
General Requirements for SPCC Plans (§112.7) and Secondary Containment Provisions
§112.7 General Requirements for SPCC Plans

Plan Format

• Prepare in writing and according to good engineering practice

• Approval of management with authority to commit resources to fully implement the Plan

• For procedures, methods, and equipment that are not yet fully operational:
  – Discuss in separate paragraphs
  – Explain separately the details of installation and start-up
Alternate Plan Formats

• If a Plan does not follow the sequence specified in the rule, an equivalent Plan may be prepared:
  – Acceptable to the Regional Administrator
  – Meets all applicable requirements in rule
  – Provide a cross-reference that shows the location of each of the SPCC requirements
3.1 Introduction to Environmental Equivalence

- The environmental equivalence provision allows for deviations from specific requirements of the SPCC rule
  - Alternative measures provide equivalent environmental protection.

- Expertise of a trained professional is important in making site-specific equivalence determinations.
  - Owners or operators of qualified facilities who choose to self-certify their SPCC Plans in lieu of PE-certification cannot take advantage of the flexibility allowed by the environmental equivalence provision, unless the alternative methods have been reviewed and certified in writing by a PE.

§112.7(a)(2)  §112.6(b)(3)(i)
6.2 General Facility Description

• Chapter was expanded to include facility description requirements (new section)
• §112.7(a)(3) requires that the Plan include a description of the physical layout of the facility.
  – Facility’s location
  – Type
  – Size
  – Geographic and topographic characteristics
  – Proximity to navigable waters
  – Other relevant information
• Supplemented with a more specific description of containers subject to the SPCC rule.
6.2.1 Oil Types and Container Capacities

- Section 112.7(a)(3)(i) requires that the Plan include the type of oil in each fixed container and its storage capacity.

- For mobile or portable containers, Plan preparer can:
  - provide the type of oil and storage capacity for each container, or
  - provide an estimate of the potential number of mobile or portable containers, the types of oil, and anticipated storage capacities

- May identify an area on the facility diagram (e.g., a drum storage area) and include a separate description of the total number of containers, capacities, and contents in the Plan or reference facility inventories

§112.7(a)(3)(i)
6.2.2 Discharge Prevention Methods

6.2.4 Countermeasures

SPCC Plan must include:

- Discussion of discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, etc.)
- Discussion of the facility’s countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor).

§112.7(a)(3)(ii)

§112.7(a)(3)(iv)
6.2.3 Drainage Controls

- The Plan must include a discussion of discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge. For example:
  - Method, design, and capacity for secondary containment chosen to address the typical failure mode, and the most likely quantity of oil that would be discharged.
  - Whether the secondary containment is either active or passive in design.
- Description for bulk storage containers should address whether the secondary containment is sized as required.

§112.7(a)(3)(iii)
SPCC Plan must:

- Discuss the methods to dispose of recovered materials in the event of a discharge.
- Include a contact list that includes phone numbers for those who must be contacted in case of a discharge to navigable waters or adjoining shorelines.
  - Facility response coordinator,
  - National Response Center,
  - cleanup contractors, and
  - all appropriate Federal, State, Tribal and local agencies
6.3 Notification Requirements

- The SPCC rule (40 CFR part 112) requires that the Plan list the type of information that is necessary to enable a person to report oil discharges to navigable waters or adjoining shorelines as required by 40 CFR part 110 (the sheen rule).
- The owner/operator of the facility should report discharges to the National Response Center (NRC)
  - 1-800-424-8802 or 1-202-267-2675
- If reporting directly to NRC is not practicable, reports also can be made to the EPA regional office or the U.S. Coast Guard Marine Safety Office (MSO) in the area where the incident occurred.
- It should be noted there are additional SPCC rule reporting requirements under §112.4:
  - If your facility has discharged more than 1,000 U.S. gallons of oil in a single discharge as described in §112.1(b), or discharged more than 42 U.S. gallons of oil in each of two discharges as described in §112.1(b), occurring within any twelve month period, you must submit certain information to the Regional Administrator within 60 days

§112.7(a)(4)
6.4.3 Requirements for a Facility Diagram

The following items are **required** by §112.7(a)(3):  

- Aboveground storage tanks;  
- Underground storage tanks. This includes those that are subject to the SPCC rule or those that are exempt;  
- Storage area(s) where mobile or portable containers are located;  
- Transfer stations such as oil transfer areas including loading/unloading racks and loading/unloading areas;  
- Oil-filled equipment such as hydraulic operating systems or manufacturing equipment;  

[continued...]
6.4.3 Requirements for a Facility Diagram
(continued)

- Oil-filled electrical transformers, circuit breakers, or other equipment;
- Connecting piping;
- Oil pits or ponds (at production facilities);
- Production facility stock tanks, separation equipment and produced water containers;
- Any other bulk storage or oil-filled operational equipment at a production facility; and
- Flowlines and intra-facility gathering lines at a production facility (including exempt intra-facility gathering lines).
6.4.4 Level of Detail

• The scale and level of detail on a facility diagram may vary according to the needs and complexity of the facility.

• May represent complicated areas of piping or oil-filled equipment in a less detailed manner on the facility diagram in the SPCC Plan
  – As long as more detailed diagrams or other form of information is maintained elsewhere at the facility, referenced in Plan.
6.4.5 Fixed Storage Containers

- The facility diagram must include the location of all containers located in a *fixed* position — i.e., those that do not move around the facility
- Where diagrams become complicated due to multiple oil storage containers, owner or operator may choose to include that information separately in an accompanying table or key.
6.4.6 Mobile or Portable Containers

- Mobile or portable containers should be marked on the facility diagram in their out-of-service or designated storage area, primary storage areas, or areas where they are most frequently located.
- If containers are stored in one area and operated in another area, both “areas” would be identified on the facility diagram.
  - “Areas” may be marked as general locations on the diagram rather than identify specific discrete locations for each container.

§112.7(a)(3)
6.4.7 Underground Storage Tanks

• Facility diagram must include the location and contents of both exempt underground storage tanks (USTs) and USTs that are subject to SPCC requirements.
  – Completely buried USTs and piping systems that are subject to 40 CFR part 280 or 40 CFR part 281 must be included in the facility diagram and marked “exempt.”
  – Below-grade vaulted tanks that supply emergency diesel generators at a nuclear power generation facility licensed by the Nuclear Regulatory Commission must be included in the facility diagram and marked “exempt.”

§112.1(d)(4)
6.4.8 Intra-facility Gathering Lines

- Facility diagram must include all transfer stations (i.e., any location where oil is transferred) and connecting pipes.
  - Intra-facility gathering lines that are otherwise exempt from SPCC requirements must be included in the facility diagram and marked as “exempt.”
Failure Analysis

- Where experience indicates reasonable potential for equipment failure
  - Tank loading or unloading equipment
  - Tank overflow, rupture, or leakage
  - Any other equipment known to be a source of a discharge

- Predict for each type:
  - Direction
  - Rate of flow
  - Total quantity of oil which could be discharged

General Requirements for SPCC Plans §112.7(b)
General Secondary Containment Requirement

• Requires secondary containment for all areas with the potential for a discharge
• Requires appropriate containment and/or diversionary structures to prevent a discharge that may be harmful (a discharge as described in §112.1(b))
• This is the minimum expectation for containment
  – General facility requirement with no sizing or freeboard requirements
Revision to General Secondary Containment Requirement

This revision:
- Clarifies that the general secondary containment requirement is intended to address the *most likely oil discharge* from any part of a facility.

New text: “… In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design.”

- Modifies §112.7(c) to expand the list of example prevention systems for onshore facilities:
  - Additional examples: drip pans, sumps, and collection systems.
Active or Passive

• The revision clarifies that the use of both active and passive secondary containment measures is allowed.

• Active containment measures are those that require deployment or other specific action by the operator.
  – These may be deployed either before an activity involving the handling of oil starts, or in reaction to a discharge.

• Passive measures are permanent installations and do not require deployment or action by the owner or operator.
Active Measures vs. Contingency Plan

• **Active secondary containment** requires a deployment action; it is put in place prior to or immediately upon discovery of an oil discharge
  – The purpose of these measures is to contain an oil discharge **before it reaches** navigable waters or adjoining shorelines

• **A contingency plan** is a detailed oil spill response plan developed when any form of secondary containment is determined to be impracticable
  – The purpose of a contingency plan should be both to outline response capability or countermeasures to limit the quantity of a discharge reaching navigable waters or adjoining shorelines, and to address response to a discharge of oil that **has reached** navigable waters or adjoining shorelines
Example Methods of Secondary Containment listed in §112.7(c)

Examples include:

- Dikes, berms, or retaining walls
- Curbing
- Culvertting, gutters, or other drainage systems
- Weirs
- Booms
- Barriers
- Spill diversion ponds and retention ponds
- Sorbent materials
- Drip pans
- Sumps and collection systems
4.7.1 Piping

- For a contingency plan for piping to be effective, discharges must be detected in a timely manner
  - Unattended facilities should be inspected more frequently than would be required at facility where secondary containment is provided
  - Aggressive pipe integrity management/testing procedures
  - Leak detection equipment
  - Enhanced corrosion protection
- If it is not feasible to effectively and reliably implement a contingency plan and the facility does not have an FRP, then owners/operators must determine how to comply with secondary containment requirements.
4.7.2 Loading or Unloading (Transfer) Areas

The determination of adequate general secondary containment volume must consider:

1. Typical failure mode
   - Identify the source and the mechanism of failure

2. Most likely quantity of oil discharged
   - The reasonably expected rate of discharge
   - The ability to detect and react to the discharge
   - The reasonably expected duration of the discharge
4.7.6 Mobile/Portable Containers

- Must comply with the secondary containment requirements of §112.8(c)(11) (or §112.12(c)(11))
  - Except mobile refuelers and other non-transportation related tank trucks
- Examples include 55-gallon drums, skid tanks, totes, and intermediate bulk containers (IBCs).

§§112.8(c)(11), 112.12(c)(11)
4.7.6 Mobile Refuelers and Other Non-transportation-related Tank Trucks

• “Mobile refueler” defined in §112.2,
  – vehicles of various sizes equipped with a bulk storage container such as a cargo tank or tank truck used to fuel or defuel aircraft, motor vehicles, locomotives, tanks, vessels or other oil storage containers, including full trailers and tank semi-trailers.

• Excluded from the sized secondary containment requirements for bulk storage containers.

• General secondary containment requirements at §112.7(c) still apply.
4.7.6 Mobile Refuelers and Other Non-transportation-related Tank Trucks (continued)

- The exemption from sized secondary containment also applies to other non-transportation-related tank trucks.
  - May operate similarly to mobile refuelers, though not specifically transferring fuel.
  - Carry other oils such as transformer oils, lubrication oils, crude oil, condensate, or non-petroleum oils such as AFVOs.
If a facility owner or operator finds that containment methods are “impracticable,” he or she may substitute a combination of other measures in place of secondary containment.

When a facility owner/operator is incapable of installing secondary containment by any reasonable method

Considerations include:
- Space and geographical limitations
- Local zoning ordinances
- Fire codes
- Safety
- Other good engineering practice reasons that would allow for secondary containment
Impracticability Provision

• If a facility owner or operator finds that containment methods are “impracticable,” he or she may substitute a combination of other measures in place of secondary containment
Meaning of “Impracticable”

• When a facility owner/operator is incapable of installing secondary containment by any reasonable method

• Considerations include:
  – Space and geographical limitations
  – Local zoning ordinances
  – Fire codes
  – Safety
  – Other good engineering practice reasons that would not allow for secondary containment

§112.7(d)
Litigation Settlement

• Economic cost may be considered in a decision to use alternative methods but may not be the only determining factor in claiming impracticability.

• See Notice Concerning Certain Issues Pertaining to the July 2002 Spill Prevention, Control, and Countermeasure (SPCC) Rule [69 FR 29728, May 25, 2004]
Impracticability Requirements

The impracticability provision requires:

1. Explanation in Plan of why secondary containment methods are impracticable

2. Periodic integrity testing of bulk storage containers and periodic integrity testing and leak testing of the valves and piping associated with the containers

3. Unless facility has submitted a Facility Response Plan (FRP) under §112.20:
   - An oil spill contingency plan following the provisions of 40 CFR part 109; and
   - A written commitment of manpower, equipment, and materials required to control and remove any quantity of oil discharged that may be harmful

§112.7(d)
Content of Oil Spill Contingency Plans

• Contingency Plan following requirements for 40 CFR 109 – Criteria for State, Local and Regional Oil Removal Contingency Plans

• Goal is to ensure timely, efficient, coordinated, and effective action to minimize damage resulting from oil discharges

§109.5
Contingency Plan Requirements

- Duties of all persons, organizations or agencies which could be involved in planning or directing oil removal operations
- Notification procedures for early detection and timely notification of an oil discharge
- Provisions to assure that full resource capability is known and can be committed during an oil discharge situation
- Specific actions to be taken after discovery and notification of an oil discharge
- Specific procedures to facilitate recovery of damages and enforcement measures as provided for by State and local statutes and ordinances.
Written Commitment of Manpower, Equipment, and Materials

- Necessary to demonstrate the ability of the facility to implement an oil spill contingency plan

- Requires either a written contract or other written documentation showing that the owner/operator has made provision for items needed for response purpose
Implementation of Contingency Plans

• For a contingency plan to satisfy the requirements of §112.7(d), facilities must be able to implement the contingency plan

• A discharge of oil must be detected in order for contingency plan to be activated

• Should consider:
  – **Time** it takes facility personnel to detect and mitigate a discharge
  – Need for enhanced discharge detection methods such as more frequent facility visits and inspections, or the use of spill detection equipment
Recordkeeping

- Written procedures of tests and inspections
- Keep record of procedures and record of inspections/tests
  - Signed by appropriate supervisor or inspector
  - With SPCC Plan
  - Period of three years
  - Records of inspection/tests kept under usual and customary business practices suffice

General Requirements for SPCC Plans

§112.7(e)
Personnel Training

• 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 mgmt

• Schedule/conduct at least one briefing/year:
  – Known discharges and failures, malfunctioning components, new precautionary measures

General Requirements for SPCC Plans

§112.7(f)
Security Requirements

- Security requirements for all applicable* facilities are now consistent with requirements for qualified facilities as finalized in December 2006.
  - More streamlined, performance-based
  - Tailored to the facility’s specific characteristics and location

* Production facilities have no security requirements
Facility Security

• To prevent acts of vandalism and assist in the discovery of oil discharges, describe how they:
  – Control access to the oil handling, processing and storage areas
  – 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
  – Address the appropriateness of security lighting
Definition of Loading/Unloading Rack

*Loading/unloading rack* means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.
Loading Racks

• Loading Rack Requirements
  – Secondary containment to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.
  – Provide interlocked warning lights or physical barrier system, warning signs, wheel chocks or vehicle break interlock system
  – Closely inspect for discharge the lowermost drain and all outlets of vehicle prior to filling and departure

• Requirements only apply when loading racks are present
• Production facilities typically do not have loading racks
Modifications to Loading Rack Provision

- Term “rack” replaces “area” throughout §112.7(h) requirement.
  - Provides clarity on applicability of the provision.
Look for the loading arm
Exclusion from Loading Rack Provision Removed in 2009

- The 2008 amendments specifically excluded onshore oil production facilities and farms from the loading/unloading rack requirements at §112.7(h), because racks are not typically associated with these types of facilities.
- This exclusion was removed in the 2009 amendments.
- No basis to specifically exclude loading/unloading racks from the requirements at §112.7(h) simply because they are not typically associated at a facility within a specific industry sector.
- The new definition for loading/unloading rack clarifies the type of equipment that is subject to the requirements at §112.7(h), eliminating uncertainty.
- For facilities (including farms and oil production facilities) that do not have a loading/unloading rack, the provisions at §112.7(h) do not apply; therefore, a specific exclusion is unnecessary.
UST Oil Transfer Clarification

- Clarification corrects preamble language in the 2002 amendments inconsistent with the Agency's position regarding transfer activities from exempt containers.
- Transfer activities associated with an exempt UST, at an otherwise regulated SPCC facility, are covered and must be addressed in the SPCC Plan.
  - If transfer to or from an exempt UST occurs across a loading/unloading rack then facility must comply with §112.7(h)
  - All other transfers/equipment (dispensers) must be addressed and meet general containment requirements
  - Dispensers and racks are not part of an UST system and therefore SPCC-regulated
SO WHAT DOES THIS MEAN?
At an otherwise regulated SPCC facility

The Following transfers to or from the UST system would be regulated under the SPCC rule
Brittle Fracture

• Field-constructed aboveground container must be evaluated for risk of discharge or failure due to brittle fracture if:
  – Container undergoes a repair, alteration, reconstruction, or change in service that might affect risk of discharge or failure due to brittle fracture or other catastrophe, or
  – Container has discharged oil or failed due to brittle fracture failure or other catastrophe.
4.2.1 Qualified Oil-Filled Operational Equipment

Determining eligibility:

• The facility owner/operator determines if he is eligible to use the alternative measures in §112.7(k).

Must answer “no” to the following to be eligible:

In the three years before the SPCC Plan is certified, has the facility had any discharges to navigable waters or adjoining shorelines from oil-filled operational equipment as described below:

• A single discharge of oil greater than 1,000 gallons?
• Two discharges of oil each greater than 42 gallons within any 12-month period?
4.2.1 Qualified Oil-Filled Operational Equipment

- **Alternative measures** in lieu of meeting general secondary containment requirements:
  - Establish and document an **inspection or monitoring program** to detect equipment failure and/or a discharge.
  - Prepare an **oil spill contingency plan** and provide a **written commitment** of manpower, equipment, and materials (unless the facility has submitted an FRP).
- **No impracticability determination needed** for the qualified oil-filled operational equipment.
- Use of alternative measures is optional.
  - The owner/operator can provide secondary containment.

§112.7(k)
4.2.1 Qualified Oil-Filled Operational Equipment

Other information:

- Owners/operators of Qualified Facilities may use these alternative measures.
  - No impracticability determination, no PE needed
- Oil-filled operational equipment does not include oil-filled manufacturing equipment (flow-through process).
  - Manufacturing equipment is more complicated and is not defined as oil-filled operational equipment
  - Manufacturing equipment is considered oil-filled equipment and therefore is not a bulk container
    - General containment 112.7(c) applies but there are no sized containment requirements
    - No integrity testing
    - No overfill requirements
SPCC Requirements for Onshore Bulk Storage Facilities (§112.8)
§112.8 SPCC Requirements for Onshore Facilities

- Outlines specific requirements (in addition to general requirements in §112.7) for onshore facilities (excluding production facilities) regarding:
  - Facility drainage
  - Bulk storage containers
  - Containment drainage requirements
  - Facility transfer operations, pumping, and facility process
Construction Requirements

- Do not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

SPCC Requirements for Onshore Bulk Storage Facilities §112.8(c)(1)
NAME THAT TANK....FOR $1,000

Convert-a-zontals
Facility Drainage

- When containment methods such as dikes and berms are used to satisfy secondary containment requirements, specific facility drainage requirements also apply.
- Diked areas at onshore facilities (except production):
  - Valves should be used to prevent a discharge into the drainage system if there is not already a system to prevent this in place
  - Diked areas can be emptied with pumps or ejectors, but these must be manually activated and the accumulation must be inspected before starting
  - Valves of manual, open-and closed design must be used for the drainage of diked areas
Facility Drainage

- When secondary containment requirements are addressed through facility drainage controls, other requirements apply:
  - §§112.8(b)(3) and (4), or §§112.12(b)(3) and (4) for undiked areas at onshore facilities (except production)
  - For example, a facility may choose to use the existing storm drainage system by channeling discharged oil to a remote containment area to prevent a discharge
  - The drainage system must be designed to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility
  - Alternatively, equip final discharge of all ditches with diversion system that would retain oil at the facility
  - Provide two “lift” pumps when using more than one continuous treatment unit
Specific (Sized) Secondary Containment Requirements

- Areas where certain types of containers, activities, or equipment are located may be subject to additional, more stringent, containment requirements.
- Sized to largest tank or tanker compartment with freeboard for a rain event.
- EPA does not specify a freeboard requirement:
  - 110% rule of thumb and 25 year 24 hour storm event.
- Specific minimum size requirement for secondary containment for the following areas:
  - Loading/unloading racks (no freeboard requirements)
  - Bulk storage containers
  - Mobile or portable bulk storage containers
  - Production facility bulk storage containers, including tank batteries, separation, and treating vessels/equipment.
Sufficiently Impervious

• §112.7(c): Secondary containment system “must be capable of containing oil and must be constructed so that any discharge ... will not escape containment system before cleanup occurs”

• §§112.8(c)(2) and 112.12(c)(2): Diked areas must be “sufficiently impervious to contain oil”

• EPA does not specify permeability or retention time for these provisions

• The PE and owner/operator have flexibility in determining how best to design secondary containment to meet these requirements
Sufficiently Impervious (continued)

• “A complete description of how secondary containment is designed, implemented, and maintained to meet the standard of sufficiently impervious is necessary” (67 FR 47102)
• Based on good engineering practice
• Consider site-specific factors
• The plan should describe how the design effectively contains oil until cleanup occurs
Regularly Scheduled Integrity Testing

• Applies to:
  – Large (field-constructed or field-erected) and small (shop-built) aboveground bulk storage containers
  – Aboveground bulk storage containers on, partially in (partially buried, bunkered, or vaulted tanks) and off the ground wherever located
  – Aboveground bulk storage containers storing any type of oil
    • Examples: mobile/portable containers, drums, totes

What containers at a facility are not subject to integrity testing provisions?
Integrity Testing

• Provides flexibility in complying with bulk storage container inspection and integrity testing requirements. Requires owner/operator to:
  – Test/inspect each aboveground container for integrity on a regular schedule and whenever material repairs are made.
  – Determine, in accordance with industry standards, the appropriate qualifications of personnel performing tests and inspections and the frequency and type of testing and inspections, which take into account container size, configuration, and design

• Establishing a baseline
• SP001 and API 653
• Visual inspection is a separate requirement
• Requirements for inspection of foundations and supports

2008 Amendments

SPCC Requirements for Onshore Bulk Storage Facilities

§§112.8(c)(6) and 112.12(c)(6)
7.4 Baselining

- If an owner/operator has yet to implement the integrity testing program, the **SPCC Plan should establish and document a schedule** that describes the projected implementation of the integrity testing program for the aboveground bulk storage containers at the facility.

- The owner or operator must then implement the inspection program.
  - In accordance with industry standards
  - Establish appropriate inspection priorities among multiple containers at a facility
  - Higher priority containers may be targeted for inspection before other aboveground containers where the baseline information is known
7.4 Baselining

Is a baseline necessary when the standard requires only visual inspections?

• No, if the industry standard only requires visual inspections for the container (e.g., certain shop-built containers) then a baseline is not necessary.
  – The standard establishes a frequency for visual inspections rather than basing the interval on the container’s corrosion rate.

• Owners and operators need to refer to the particular industry standard identified in the SPCC Plan to determine the scope of inspection and testing requirements.
  – For example, under the STI SP001 standard, visual inspection is allowed for portable containers such as drums and totes.
7.6.2 Evaluating Inspection, Evaluation and Testing Programs

**Figure 7-5.** Summary of integrity testing and inspection program documentation for bulk storage containers, by type of SPCC Plan and standard applicability case

- **PE-Certified Plan Facility**
  - Industry standard applies to containers
  - Facility implements standard inspection program
  - Plan provides reference to standard used to comply with the SPCC requirements
  - PE certified the Plan

- **Tier II Qualified Facility Plan**
  - Industry standard applies to containers
  - Facility implements hybrid inspection program
  - Plan describes the hybrid program*
  - Plan provides justification for hybrid program based on environmental equivalence (EE)
  - Plan describes how and why the program deviates from applicable industry standards
  - PE certified the EE measures and Plan

- **Tier I Qualified Facility Plan**
  - Industry standard applies to containers
  - Facility implements standard inspection program
  - Plan provides reference to standard used to comply with the SPCC requirements
  - Owner/operator certified the Plan

- **Industry standards do not apply to containers (Expected to be very rare circumstances)**
  - Facility implements hybrid inspection program
  - Plan describes the hybrid program*
  - Plan discusses why no standard applies**
  - (no EE justification required)
  - Owner/operator certified the Plan

* Plan describes how the hybrid inspection program meets the minimal recommended elements described in Section 7.5.3.
** EPA Inspector should review carefully to confirm that industry standards do not apply
Completely (and Partially) Buried Metallic Tanks

- Protect completely buried metallic storage tanks installed on or after January 10, 1974 from corrosion using:
  - Coatings or Cathodic protection
- Ensure that corrosion protection is compatible with local soil conditions
- Conduct regular leak tests on metallic tanks
- Do not use partially buried or bunkered metallic tanks unless you protect the buried section from corrosion (see above methods)

SPCC Requirements for Onshore Bulk Storage Facilities

§§112.8(c)(4) and 112.12(c)(4)
Internal Heating Coils

• Control leakage through defective internal heating coils by:
  – Monitoring steam return and exhaust lines for contamination from internal heating coils that discharge into open watercourse; or
  – Pass steam return or exhaust lines through settling tank, skimmer, or other separation or retention system

SPCC Requirements for Onshore Bulk Storage Facilities

§§112.8(c)(7) and 112.12(c)(7)
Overfill Protection

• 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)
Piping Installations

- Buried piping installed after August 16, 2002 must be:
  - Protectively wrapped and cathodically protected; or
  - Satisfy the corrosion protection provisions for piping in 40 CFR parts 280 or 281 (state program)

- Requirement applies to all soil conditions
- Exposed piping must be inspected for corrosion
- Take corrective action if corrosion damage

SPCC Requirements for Onshore Bulk Storage Facilities

§§112.8(d)(1) and 112.12(d)(1)
Piping Installations (continued)

- Conduct regular inspections of all aboveground valves, piping, and appurtenances
  - Assess general condition of items such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces

- Conduct integrity and leak testing of buried piping at time of installation, modification, construction, relocation, or replacement

- Cap or blank-flange piping

- Signs to prevent pipe strikes

- Properly designed piping supports

SPCC Requirements for Onshore Bulk Storage Facilities

§§112.8(d)(4) and 112.12(d)(4)
2008 WINNER OF BEST STICK IN A SUPPORTING ROLE
SPCC Requirements for Oil Production, Drilling and Workover Facility

(§112.9-10)
Overview of Rule Revisions Related to Oil Production Facilities

- EPA streamlined, tailored, and clarified requirements for oil production facilities including:
  - Definition of Production Facility
  - SPCC Plan Preparation and Implementation Timeframe
  - Flowlines and Intra-facility Gathering Lines
  - Flow-through Process Vessels
  - Produced Water Containers
  - Oil and Natural Gas Pipeline Facilities
  - Definition of “Permanently Closed”
General Requirements Applicable to ALL Facilities

- Production facilities must meet general requirements under §112.7
  - Except the security requirement (§112.7(g))
  - Except general containment requirement (§112.7(c)) for certain flowlines and gathering lines
Which rule section applies - §112.8 or §112.9?

- 2008 Amendment Preamble Clarification:
  - Only the infrastructure, containers and equipment uniquely associated with the production of crude oil is subject to the specific requirements for a production facility (§112.9).
  
  - Containers, equipment, and piping containing crude oil used in the production, extraction, recovery, lifting, stabilization, separation or treatment of oil or gas condensate, or their associated storage or measurement are included.
On December 10, 2010, EPA provided guidance to API regarding the applicability of the SPCC rule to gas plants and gas compression stations. Gas plants are generally not considered oil production facilities under the SPCC rule and are therefore subject to the facility specific requirements under 40 CFR part 112.8 rather than 112.9. As with gas plants, gas compression stations are not generally considered oil production facilities under the SPCC rule and are therefore subject to the facility specific requirements under 40 CFR part 112.8 rather than 112.9.
§112.9 SPCC Requirements for Onshore Production Facilities

• Outlines specific requirements (in addition to general requirements in §112.7) for onshore production facilities regarding:
  – Facility drainage
  – Bulk storage containers
  – Facility transfer operations, pumping, and
SPCC Plan Preparation and Implementation Timeframe

- A new oil production facility has six months after the start of operations to prepare and implement an SPCC Plan.
  - A new oil production facility is one that becomes operational after November 10, 2010 (offshore or FRP) or November 10, 2011 (onshore).
  - “Start of operations” is indicated by the start of well fluid pumping, transfer via flowlines, separation,
SPCC Plan Preparation and Implementation Timeframe

- Oil production facilities are likely to stabilize within six months after the start of operations.
  - Applicable only to oil production facilities due to their unique characteristics of variable and uncertain initial flowrates

- Amendment does not apply to:
  - An existing production facility in which a new well is drilled—facility owner/operator must amend SPCC Plan within 6 months in accordance with §112.5(a)
  - Drilling or workover activities at a production facility—drilling and workover operations are subject to requirements at §112.3(c)
Production Facility Drainage

- At tank batteries and separation and treating areas
  - Close and seal at all times drains of dikes (or drains of equivalent measures) where there is a reasonable possibility of a discharge
  - Often dikes areas not equipped with valve and are drained manually by a pump.

- Prior to drainage, must inspect diked area and take action according to §112.8(c)(3)
  - Inspect retained rainwater to ensure it will not be discharged in harmful quantities
  - Supervise open bypass valve, and reseal after drainage is complete
  - Keep adequate records of such events
Production Facility Drainage

- Remove accumulated oil on the rainwater and return it to storage or dispose of it in legally approved methods.

- Oil field drainage
  - Inspect at regularly scheduled intervals for an accumulation of oil that may have resulted from any small discharge.
  - Promptly remove any accumulations of oil.
Bulk Storage Containers at Production Facilities

Container compatibility (§112.9(c)(1)):

Do not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.
For all bulk containers in the tank battery, separation and treatment facilities satisfy the sized containment requirement (sized to largest container plus freeboard for precipitation); or

For process vessel and/or produced water containers, meet the alternative compliance requirements

For oil containers that directly support production operations at a production facility but are not a part of a tank battery, or separation, and treatment equipment, then follow §112.7(c) for secondary containment requirements

If the bulk container does not support production operations then the §112.8 requirements apply
Bulk Storage Container Inspections at Production Facilities

- Visual Inspection (§112.9(c)(3))
- Periodically and upon a regular schedule visually inspect each container for deterioration and maintenance needs
- Include the foundation and support of each container that is on or above the surface of the ground
Bulk Storage Containers at Production Facilities

- Engineer according to good engineering practice to prevent discharges (§112.9(c)(4)), providing at least one of the following:
  - Ensure the container capacity is adequate to prevent overfill if a pumper/gauger is delayed in making regularly scheduled rounds
  - Provide overflow equalizing lines between containers so that a full container can overflow to an adjacent container
  - Provide vacuum protection that is adequate to prevent container collapse during a pipeline run or transfers
Equalizing Line
What is a flow-through process vessel at an oil production facility?

- Has the primary purpose of separating the oil from other fractions (water and/or gas) and sending the fluid streams to the appropriate container.
- Can be horizontal or vertical separation vessels (e.g., heater-treater, free-water knockout, gun-barrel, etc.)
Compliance Alternative: Flow-Through Process Vessels

- Either comply with sized secondary containment for flow-through process vessels (separation equipment), or, in the alternative:
  - Visual inspection and/or testing on a periodic and regular schedule
  - Corrective action or repairs
  - Prompt removal or initiation of actions to stabilize and remediate any accumulations of oil discharges

- General secondary containment requirements still apply.

If the facility discharges to navigable waters or adjoining shorelines:
  - 1,000 U.S. gallons of oil in a single discharge, or
  - 42 U.S. gallons of oil in each of two discharges within a 12 month period

from a flow-through process vessel, then the facility owner/operator may no longer take advantage of this alternative option and must comply with the sized secondary containment requirements at §112.9(c)(2) and inspection requirements at §112.9(c)(3) within six months of discharge.
Compliance Alternative: Produced Water Containers

- Instead of providing sized secondary containment for produced water containers, a facility owner/operator can:
  - Have a PE certify a procedure for each produced water container that is designed to separate the free-phase oil that accumulates on the surface of the produced water, that is implemented on a regular schedule;
  - Conduct visual inspections, maintenance and corrective action;
- General secondary containment requirements still apply

If the facility discharges to navigable waters or adjoining shorelines:
  - 1,000 U.S. gallons of oil in a single discharge, or
  - 42 U.S. gallons of oil in each of two discharges within a 12 month period from a produced water container, then the facility owner/operator may no longer take advantage of this alternative option and must comply with the sized secondary containment requirements at §112.9(c)(2) and inspection requirements at §112.9(c)(3) within six months of the discharge.
Procedure to Remove Oil from Produced Water Containers

- A procedure designed to remove free-phase oil that accumulates on the surface of the produced water container
  - Implemented on a regular schedule
  - General secondary containment must be able to address the amount of oil in the produced water container

- SPCC Plan must include:
  - Description of the free-phase oil separation and removal;
  - Frequency it is implemented;
  - Amount of free-phase oil expected to be inside the container;
    and
  - Description of the general secondary containment

- Owner or operator must keep records of the implementation of these procedures in accordance with §112.7(e).
PE Certification

- PE attests that Plan is prepared in accordance with good engineering practices and includes a provision certifying that:
  - An oil removal procedure for produced water containers is designed to reduce the accumulation of free-phase oil, and
  - The procedures and frequency for required inspections, maintenance and testing have been established and are described in the Plan.
What is a flowline?
- Flowlines are piping that transfer crude oil and well fluids from the wellhead to the tank battery and from the tank battery to the injection well.

What is a gathering line?
- Gathering lines transfer crude oil product between tank batteries, within or between facilities.
- Any gathering lines within the boundaries of a facility are “intra-facility gathering lines” and within EPA’s SPCC jurisdiction.
- Gathering lines often originate from an oil production facility’s lease automatic custody transfer (LACT) unit.

“Flowline” and “gathering line” are not defined in the rule.
Flowlines and Gathering Lines
Compliance Alternative: Flowlines

- Secondary containment is often impracticable for flowlines and intra-facility gathering lines
- SPCC rule provides an optional alternative to general secondary containment
- Instead of secondary containment for flowlines and intra-facility gathering lines, rule requires:
  - Implementation of an oil spill contingency plan in accordance with 40 CFR part 109
  - Written commitment of manpower, equipment, and materials to control and remove any quantity of oil discharged that may be harmful
  - Flowline/intra-facility maintenance program meeting the new rule requirements.
- Secondary containment may still be used instead
Exemption for Certain Gathering Lines

- Gathering lines that are subject to the DOT regulatory requirements at 49 CFR parts 192 or 195 are **exempt** from the SPCC requirements.
  - Exemption is for intra-facility gathering lines present at a facility where the piping is subject to both EPA and DOT jurisdiction and regulations.
Flow and Intra-Facility Gathering Line Maintenance Program

- Requirements for flowline and intra-facility gathering line maintenance program were made more specific.

- Before the 2008 amendments, the rule required, under §112.9(d)(3), to “have a program of flowline maintenance”
Flow and Intra-Facility Gathering Line Maintenance Program

- The maintenance program must address procedures to:
  1) Ensure compatibility with the type of production fluids, their potential corrosivity, volume, and pressure, and other conditions expected in the operational environment
  2) Visually inspect and/or test on a periodic and regular schedule for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in §112.1(b)
  3) Take corrective action or make repairs as indicated by regularly scheduled visual inspections, tests, or evidence of a discharge
  4) Promptly remove or initiate actions to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances
Transfer Operations – Aboveground Valves and Piping

- Inspect, periodically and upon a regular schedule, for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves and other such items.
Transfer Operations – Saltwater Disposal Facilities

- Inspect saltwater (oil field brine) disposal facilities often to detect possible system upsets capable of causing discharge

- Particularly following a sudden change in atmospheric temperature
Onshore Drilling and Workover Requirements
Onshore Drilling and Workover Requirements

- Meet general requirements listed under 40 CFR 112.7, and:

- Position or locate mobile drilling or workover equipment so as to prevent a discharge §112.10(b)
Onshore Drilling and Workover Requirements

- Provide catchment basins, reserve pits, or diversion structures to contain any spill of oil or oily fluids (drilling mud)

§112.10(c)
Onshore Drilling and Workover

- No specific sizing requirement, and no freeboard requirement for secondary containment

§112.10(c)
Onshore Drilling and Workover

- Install a Blow Out Prevention (BOP) assembly and well control system
- The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered

§112.10(d)
Impracticability for Onshore Drilling or Workover Equipment

- The facility owner/operator may determine that it is impracticable to provide secondary containment in accordance with §112.10(c) or §112.7(c).

- Per §112.7(d), the SPCC Plan must:
  - Clearly explain why secondary containment is not practicable.
  - Document how the additional regulatory requirements of §112.7(d) are implemented.
Animal Fats and Vegetable Oils (§112.12)
§112.12 Animal Fats and Vegetable Oils

- Outlines specific requirements (in addition to general requirements in §112.7) for facilities with animal fats and oils and greases, and fish and marine mammal oils; and for vegetable oils, including oils from seeds, nuts, fruits, and kernels regarding:
  - Facility drainage
  - Bulk storage containers
  - Facility transfer operations, pumping, and facility process
Facility owner or operator is required to document procedures for inspections and testing in the SPCC Plan.

Flexibility to use a visual inspection program for integrity testing that is appropriate for containers that store AFVOs that meet certain criteria.
Eligibility Criteria

- Differentiated integrity testing requirements apply to bulk storage containers that:
  - Are subject to the applicable sections of the Food and Drug Administration (FDA) regulation 21 CFR part 110, *Current Good Manufacturing Practice in Manufacturing, Packing or Holding Human Food*;
  - Are elevated;
  - Are made from austenitic stainless steel;
  - Have no external insulation; and
  - Are shop-built.

- AFVO containers that meet the eligibility criteria already have environmentally equivalent measures in place for integrity testing.
  - Owners/operators do not need to state reasons for nonconformance with the current integrity testing requirements.
Chapter 5: Oil/Water Separators
5.2 Overview of Provisions Applicable to OWS

Figure 5-1: OWS subject to wastewater treatment exemption

[Figure was updated]

OWS used exclusively for wastewater treatment

Are exempt from all SPCC requirements in accordance with §112.1(d)(6) and not subject to the rule**

Do not count toward overall storage capacity at the facility**

**Any oil storage container that is used to hold oil removed from the separation process is considered a bulk storage container and must comply with applicable SPCC requirements
5.2 Overview of Provisions Applicable to OWS

Figure 5-2: OWS used to satisfy SPCC rule requirements.

[Figure was updated]

OWS used exclusively to satisfy SPCC rule requirements

OWS used to comply with general secondary containment requirements of 112.7(c)

Secondary containment sized to address the most likely oil discharge from any part of the facility

Must be sized to contain the maximum capacity of any single compartment of a tank truck/car loaded or unloaded at the facility

OWS used to comply with sized secondary requirements for loading/unloading racks in 112.7(h)(1)

Must be sized to contain the largest single bulk storage container with sufficient freeboard to contain precipitation

OWS used to comply with sized secondary requirements for bulk storage containers in 112.8(c)(2), 112.8(c)(11), 112.12(c)(2), 112.12(c)(11)

OWS used to comply with facility drainage requirements of 112.8(h)(1), 112.9(b) or 112.12(b)

OWS used as secondary containment to comply with 112.7(c)

OWS used at an Offshore Drilling, Workover and Production Facility

Are not bulk storage containers and not subject to bulk storage container requirements**

Do not count toward overall storage capacity at the facility**

**Any oil storage container that is used to hold oil removed from the separation process is considered a bulk storage container and must comply with applicable SPCC requirements
5.2 Overview of Provisions Applicable to OWS

Figure 5-3: OWS at oil production facilities

Production, Drilling or Workover Facilities
- OWS are flow-through process vessels and are subject to §112.7 and applicable requirements of §112.9
  - Subject to specific secondary containment requirements of 112.9(c)(2) and visual inspection requirements of 112.9(c)(3)
  - Secondary containment must be designed to contain the capacity of largest single container and sufficient freeboard to contain precipitation

- Subject to general secondary containment requirements of 112.7(c) and the alternative requirements of 112.9(c)(5)
  - Facility owner/operator must perform periodic inspections, take corrective actions, and promptly remove or remediate any accumulations of oil.
  - Secondary containment sized to address the most likely oil discharge from any part of the facility

Offshore Drilling, Workover and Production Facility
- OWS used as part of the oil production process are subject to §112.7 (including 112.7(c)), 112.11(b) and 112.11(d)
  - Secondary containment sized to address the most likely oil discharge from any part of the facility
  - OWS used to comply with 112.7(c) (See Figure 5-2)

- Secondary containment sized to address the most likely oil discharge from any part of the facility
  - Count toward overall storage capacity at the facility

**Any oil storage container that is used to hold oil removed from the separation process is considered a bulk storage container and must comply with applicable SPCC requirements**
5.2.4 Oil Recovery and/or Recycling Facilities

- This use of OWS now included in guidance.
- Collect and consolidate production fluids from multiple oil production facilities to recover and treat oil.
- Waste oil recyclers (e.g., motor oil recyclers) and facilities engaged in the recovery and/or recycling of animal fats and vegetable oils (AFVO).
- Operations focus on oil treatment rather than wastewater treatment.
  - Not eligible for the wastewater treatment exemption.
5.2 Overview of Provisions Applicable to OWS

Figure 5-4: OWS at oil recovery and/or recycling facilities

[Figure was updated]

Onshore Oil Recycling or Oil Recovery Facilities

OWS are oil-filled manufacturing equipment and not bulk storage containers

Subject to §112.7 requirements including §112.7(c) general secondary containment

Petroleum and Non-petroleum Oil Facilities (except AFVO)
Subject to requirements of §112.8(b) §112.8(d)

AFVO Facilities
Subject to requirements of §112.12(b) §112.12(d)

Count toward overall storage capacity at the facility

**Any oil storage container that is used to hold oil removed from the separation process is considered a bulk storage container and must comply with applicable SPCC requirements**
For More Information

- **2008 SPCC rule amendment Federal Register notice** (73 FR 74236, December 5, 2008)
  - http://www.gpoaccess.gov/fr/
  - http://www.epa.gov/emergencies/content/spcc

- **2009 SPCC rule amendment Federal Register notice** (74 FR 58784, November 13, 2009)
  - http://www.gpoaccess.gov/fr/
  - http://www.epa.gov/emergencies/content/spcc

- **Complete Oil Pollution Prevention regulation** (40 CFR part 112)
  - http://www.gpoaccess.gov/cfr
  - http://www.epa.gov/emergencies/lawsregs.htm

- **EPA Emergency Management Web Site**
  - www.epa.gov/emergencies
  - www.epa.gov/oilspill

- **Superfund, TRI, EPCRA, RMP, and Oil Information Center**
  - (800) 424-9346 or (703) 412-9810
  - TDD (800) 553-7672 or (703) 412-3323
Any Questions?

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U.S. EPA Office of Emergency Management
Regulation Implementation Division
http://www.epa.gov/emergencies

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