



Spill Prevention, Control and Countermeasure (SPCC) Planning 40 CFR, Part 112

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Introduction to Spill Prevention Control and Countermeasures Planning

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Overview

The goal of this presentation is to provide IAPA members with a general overview of the requirements for developing and maintaining a Spill Prevention Control and Countermeasures (SPCC) Plan

Plan Purpose

- Minimize / eliminate potential for discharge of oil into navigable waters of the United States or adjoining shorelines
- Comply with Federal/State requirements for storage and use of oil based products at the Site



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Historical Development

- SPCC Rule originally promulgated on December 11, 1973 and became effective on January 10, 1974

Regulatory Citation

Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112)

- SPCC Rule has been revised regularly since then with the latest updates occurring in 2009, 2010 and 2011.

Updates implemented primarily for clarification and streamlining requirements. Although there have also been numerous format changes designed to assist those who develop and inspect the plan locate required elements.

Hot tip – “SPCC Guidance for Regional Inspectors”

<http://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spcc-guidance-regional-inspectors>.



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Applicability

Facility must meet three (3) specific criteria to be subject to the SPCC Rule.

1. **Must be non-transportation related** Essentially this means that it is not a DOT regulated Facility. (Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency – November 24, 1971)

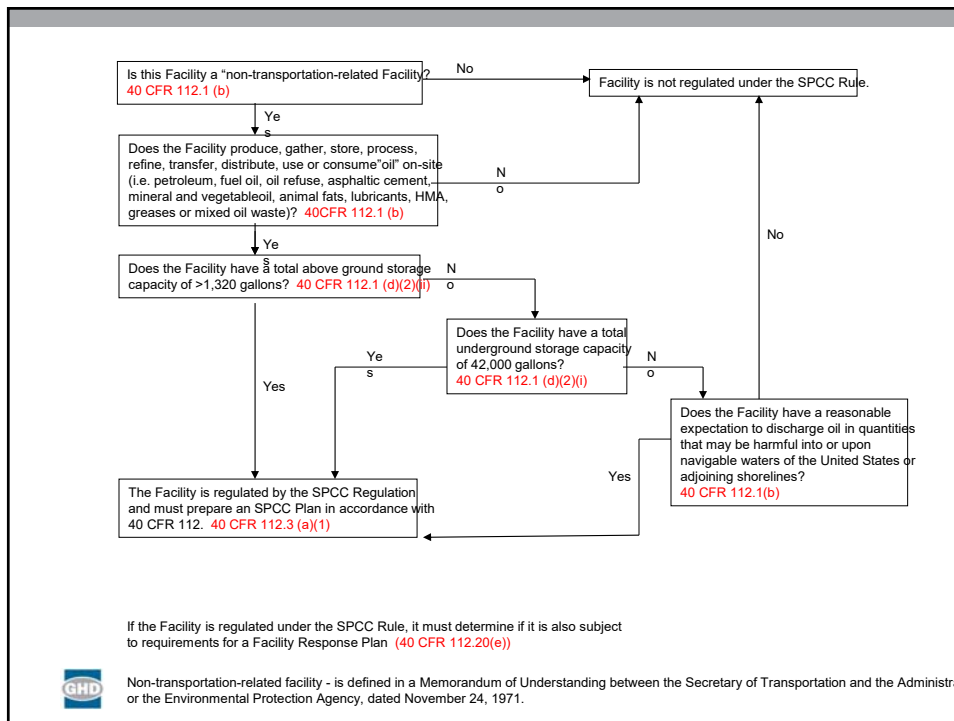
2. **Must have a total aboveground storage capacity, greater than, or equal to 1,320 gallons or completely buried storage tank capacity of greater than 42,000 gallons**

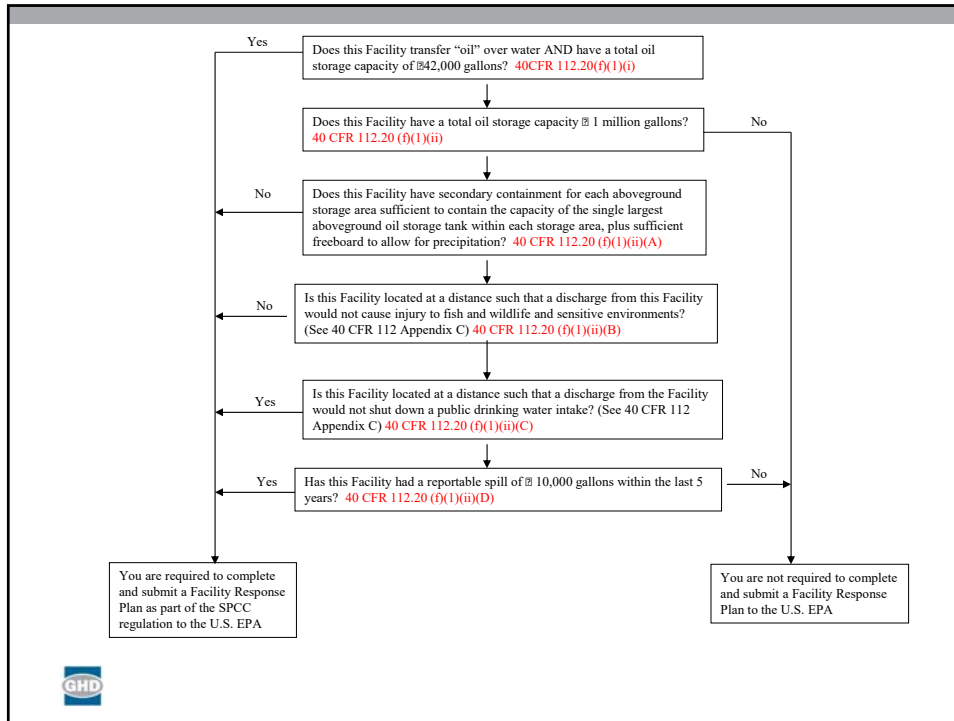
Only containers of oil with a capacity of 55 gallons or greater are counted in meeting this threshold and any completely buried tank meeting the 40 CFR 280 technical requirements is exempted from the threshold determination.

Also includes oil filled equipment (transformers, heaters, generators, etc.)

3. **There must be a reasonable expectation of a discharge into or on navigable waters of the United States or adjoining shorelines.**

For the purpose of determining the applicability of this criteria, the use of manmade equipment, dikes, or other structures to hinder, restrain, contain, or prevent discharge must be excluded from consideration.





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Definition of Oil

The Term oil under the SPCC Rule includes, but is not limited to:

- petroleum
- Fuel oil
- Oil refuse
- Mineral oils
- Oily sludge
- Oils or greases of animal, fish or marine mammal origin
- fats
- vegetable oils
- synthetic oils
- vegetable oils
- Asphalt cement*

*"Asphalt" exclusion – Hot Mix Asphalt (HMA) and HMA containers are exempt from the SPCC Rule. This does not include asphalt cement, binders, cutbacks or emulsions.

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Types of SPCC Plans

Essentially two types of SPCC Plans

- Self-Certified Plan – Tier I/II Plan - Only for “Qualified Facilities”
 - 10,000-gallons or less in aggregate aboveground oil storage capacity;
 - Facility has not had a reportable spill in the last 3 years
 - Max. individual aboveground oil container capacity of 5,000-gallons. (Tier II, if present)

<https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/tier-i-qualified-facility-spcc-plan-template>

- P.E. Certified Plan – Total aboveground storage of more than 10,000 gallons.



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Reportable Spill

According to the United States Environmental Protection Agency (USEPA), the definition of a “reportable oil spill” is:

- Violate applicable water quality standards;
- Cause a film or “sheen” upon, or discoloration of the surface of the water or adjoining shorelines; or
- Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.



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Preparation of the SPCC Plan

Requirements mandated under the 40 CFR Part 112
Rules

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SPCC Plan Requirements

Owners/operators of facilities subject to the SPCC Rule must develop a written plan.

The Plan must:

1. Be prepared in accordance with good engineering practices, including consideration of applicable industry standards.
2. Be reviewed and certified by a Licensed Professional Engineer.
3. Include a Written Commitment to providing necessary personnel, equipment and resources to affect an appropriate response to a discharge (should it occur).
4. Be maintained at the Facility if attended over 4 hours per day, and
5. Be made available to the Regional Administrator (or his/her representative) during normal business hours.



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General Requirements for SPCC Plans Plan Elements

1. **Facility Diagram**

Diagram or Site Map of the Facility which identifies the location and contents of each oil containing container.

Would include location of spill kits (if present). It might also include contouring features (site elevation data) for use in predicting directionality of surface flow and/or subsurface drainage features.



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General Requirements for SPCC Plans Plan Elements

2. **Written description of the physical layout of the facility identifying each of the following:**

- Type of oil in each storage container, it's capacity and materials of tank construction (steel, FRP, double-walled, etc.)
- A description of any secondary containment or diversionary structures or equipment used to prevent a discharge.
- Measures for discharge discovery, response and, if necessary, cleanup.
- Disposal methods for recovered materials.
- Contact list and telephone numbers of officials, responders and regulatory officials.



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General Requirements for SPCC Plans Plan Elements

3. Information and procedures to identify, respond to, and report a discharge if and/or when it occurs:

- Facility address and telephone number
- Date and time of discharge
- Estimate of the amount discharged
- Cause, source and extent of damages
- Actions taken to address the discharge

The SPCC should describe in detail how the company will respond to release – Minor releases vs. Major releases.



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General Requirements for SPCC Plans Plan Elements

4. A description of the secondary containment or diversion structure/equipment used to prevent a discharge.

- Secondary containment must contain entire contents of the single largest oil containing vessel within the structure.
- Retention ponds, curbing, spill diversion ponds
- Sumps and other collection systems, or
- IF IT CAN BE DEMONSTRATED that these measures are not practicable - Alternative Method or EQUIVALENT METHOD.

As long as the alternative measures provide “equivalent environmental protection”. (See Chapter 3 – Environmental Equivalence – SPCC Guidance For Regional Inspectors)



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General Requirements for SPCC Plans Plan Requirements

5. A description of inspection, tests or records maintained to demonstrate compliance with the SPCC Rule.

- Inspections of tanks and secondary containment structures.
- Inspections of oil storage areas - i.e. tote storage of asphalt release or anti-strip agents, 55-gallon drums of hydraulic fluid.
- Fuel loading and unloading areas and fuel delivery records
- Inspections of spill kits to make sure that any supplies used are inventoried and replaced so that they are available for the next event.
- Inspections of facility security measures
- Inspections must be documented and maintained in the Facilities operating records (SPCC Plan).



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General Requirements for SPCC Plans Plan Requirements

6. A description of security measures implemented by the Facility.

The inclusion of security requirements for facilities where oil containing vessels are stored was originally intended to include elements that would discourage vandalism and theft. Requirements for fencing, adequate illumination (lighting), locked entrance gates, secured dispensing lines, capped and locked valves are all designed to prevent unauthorized access to the tanks and their contents.

Many facilities employ security services that monitor the facility during off production hours or during periods of inactivity. Any provision made with a security firm and all of the actions taken by facility management to protect and secure a facility need to be included in the SPCC Plan.



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General Requirements for SPCC Plans Plan Requirements

7. A description of Facility tank car/tank truck unloading procedures.

Describe the protocols/procedures to be followed by the driver of the tanker delivering asphalt to the Site. Many facilities have the instructions posted on a sign next to the tanks where deliveries are made. These procedures should be documented in the plan

There should also be procedures for dispensing fuel into heavy equipment and facility vehicles. These procedures don't need to be elaborate but they need to be documented and enforced (i.e. things like "don't leave fueling operations unattended").



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General Requirements for SPCC Plans Plan Requirements

8. A description of Facility drainage / Facility drainage systems

Another element that needs to be included in the SPCC plan is an assessment of where and how a release might migrate in the event of a discharge. The SPCC Plan must describe the potential pathway a release or discharge would follow, estimated distance to navigable waters and any measures employed by the Facility to impede or arrest the flow.

- Where will it go?
- What provisions are taken to ensure no oil is released?



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General Requirements for SPCC Plans Plan Elements

9. Description of personnel training and discharge prevention procedures.

Oil handling personnel must be trained annually in the operation and maintenance of discharge equipment, response procedures, and reporting requirements. All potential responders need to be familiar with the plans SPCC plan and laws applicable to spill response.

The SPCC Plan must include a description of the training program and the frequency it is presented as well as who is trained. It must also contain records that the training occurred. According to EPA, *“if it isn’t documented, it didn’t happen”*.



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General Requirements for SPCC Plans Plan Elements

10. Demonstration of compliance with bulk storage tank requirements.

Description of secondary containment for all AST's and methodology for assuring adequate capacity with contained substance and drainage.

This is more about quantifying the capacity of your secondary containment structure and any additional volume freeboard typically required to deal with precipitation events. Typically this includes the calculations of volume capacity of the secondary containment structure and additional freeboard necessary to offset a 25 year, 24 hour precipitation event.



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General Requirements for SPCC Plans Plan Elements

11. Completion and Certification of the Applicability of Substantial Harm Criteria (40 CFR Part 112.20(e))

- This is simply a one page form that must be included in your SPCC Plan. It includes a series of questions for which each answer must be provided in the negative or the Facility could become subject to the much more onerous Facility Response Plan (FRP) requirements.

A copy of this Certification form is included as an attachment to this presentation.



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General Requirements for SPCC Plans Plan Elements

12. Cross Reference Matrix

The EPA allows for different SPCC Plan Formats as long as the specific requirements are “cross-referenced” in the alternate format. USEPA has a downloadable cross-reference table on their web site at:

A copy of the Cross Reference Matrix can be found in Appendix D to the SPCC Guidance For Regional Inspectors. I've also included one that we prepared recently for example purposes.

The cross reference was originally required to demonstrate equivalent compliance with the provisions of SPCC Plans prior to, and after the regulatory citations were altered. In the SPCC Plans that we (GHD) put together we've focused on using the reference to identify relevant plan elements within the document.



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