

# SPCC Guidebook Training

*National Shipbuilding Research Program  
Environmental Technologies Panel  
Bath, Maine*



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# SPCC Regulatory Updates

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- New Deadline - For existing facilities, deadline for preparing and implementing the Final Rule and amendments is **July 1, 2009**.
- Oil-filled Operational Equipment - “qualified” oil-filled operational equipment no longer required to comply 112.7(c). *(regulatory relief?)*
- Self Certification - for “qualified facilities” - no discharge of >1,000 gal. or two > 42 gal. in any 12-month period in last 3 years and less than 10,000 gallons aggregate aboveground storage capacity

# SPCC Regulatory Updates (continued)

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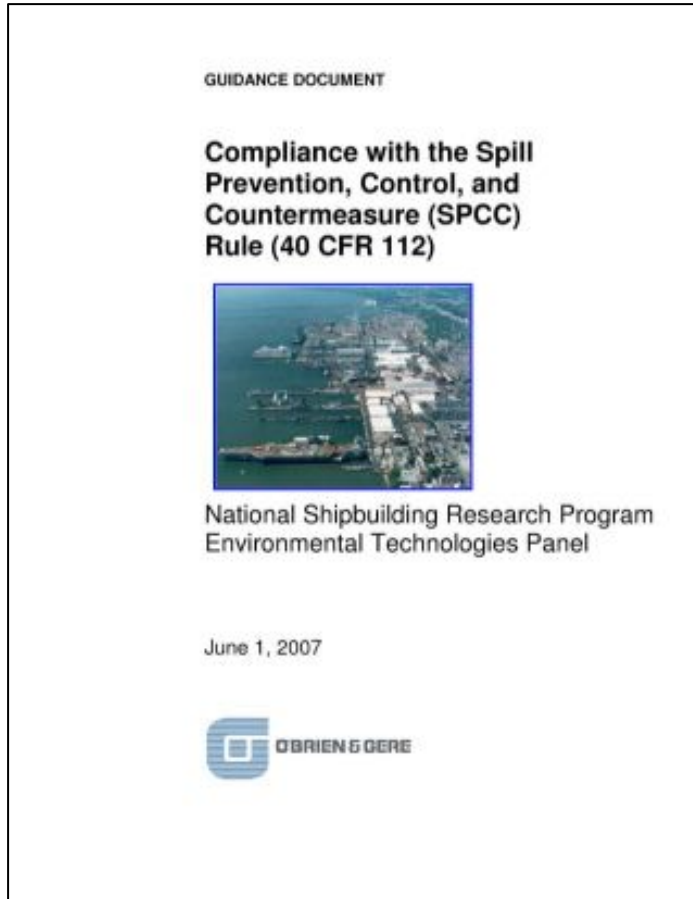
- Motive Power Containers - exempt from SPCC Rule
- Mobile Refuelers (Fuel Delivery Trucks) - No longer subject to “sized” secondary containment requirements (**but** these bulk storage containers must comply with other requirements)

# SPCC Guidebook Training Outline

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- Overview of Guidebook
- Review What's Covered and What's Not Covered
- Review Requirements
- Site Inspection
- Fault Analysis
- Environmental Equivalence
- Impracticability
- Review Scenarios
- Q&A

# Overview of Guidebook



- 19.8 MB
- Adobe PDF format
- Book-marked
- Example training presentation (Appendix F) also included as a Microsoft Powerpoint file

# Overview of Guidebook

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## Table of Contents

1. Introduction
2. The SPCC Rule
3. Site Inspection and Fault Analysis
4. Preparation of and Amendments to the Plan
5. Requirements for General Containment and Facility Drainage
6. Requirements for Bulk Storage Tanks, Including Portable Containers and Mobile Equipment
7. Requirements Applicable to Other Particular Situations
8. Administrative Requirements of the SPCC Rule
9. Environmental Equivalence Demonstrations
10. Determinations of Impracticability for Secondary Containment

# Overview of Guidebook

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## Appendices

- A NSRP Member Survey and Tabulation of Responses
- B Glossary of SPCC Terms and Definitions - words in **bold**
- C SPCC Final Rule (and 12/26/06 amendments)
- D Summary of Oil Spill Laws in NSRP Member States
- E Example Facility Diagrams
- F Example Training Presentation - also a separate MS Powerpoint file
- G 40 CFR 109 Requirements for Oil Spill Contingency Plans

# What's Covered and What's Exempt

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- Section 2. The SPCC Rule
  - 2.2. Applicability:
    - Any **non-transportation related facility** which
    - **could reasonably be expected to**
    - **discharge**
    - **oil**
    - **in quantities that may be harmful.**

# What's Covered and What's Exempt

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Transportation-related facilities and equipment:

- 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 ballast water or tank washings from vessels.

Non-transportation-related facilities and equipment:

- Oil storage tanks, pumps, and drainage systems, but excluding facilities, units or processes integrally associated with transferring oil in bulk to or from a vessel.
- Waste treatment facilities but excluding storage tanks and appurtenances for the reception of oily ballast water and tank washings from vessels

See Guidebook Table 2-2 and Figure 2-1.

# What's Covered and What's Exempt

## ➤ Proximity to water ? **NOT determinative**

The determination of whether a facility could reasonably be expected to have a discharge “must exclude manmade features such as dikes, equipment, or other manmade structures that prevent, hinder, or restrain a discharge.” (67 FR 47102)



# What's Covered and What's Exempt

## ➤ Concentration of oil?

**NOT determinative**



“the percentage of oil concentration in the water is not determinative for the purpose of the definition of the discharge standard.” (e.g. bilge water) (67 FR 47076)

# What's Covered and What's Exempt

- A discharge in quantities that may be harmful is one that
  - Causes a sheen or discoloration on the surface,
  - Causes a sludge or emulsion beneath the surface, or
  - Violates an applicable water quality standard



# What's Covered and What's Exempt

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## Section 3. Site Inspection and Fault Analysis

- 3.1 Oil Containers that are Covered by the SPCC Rule
  - 3.1.1. Excluded or Exempted Containers
  - 3.1.2. Regulated Containers

# What's Covered and What's Exempt

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## Wastewater Treatment Facilities

Any facility or part thereof used exclusively for wastewater treatment, including oil/water separators that are used exclusively for wastewater treatment.



# What's Covered and What's Exempt

## Motive power containers

An onboard bulk storage container, or a portable tank, or a mobile offshore unit, or ancillary equipment, or oil-filled operational equipment.

**Exempt**



NEW DEVELOPMENT: Belly tanks on cranes **are** motive power containers.

# What's Covered and What's Exempt

Size of container ?

**IS determinative**



# What's Covered and What's Exempt

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## Permanently closed containers

- Does not mean
  - Containers used for standby storage, seasonal storage, or temporary storage, or not otherwise permanently closed.
- Means
  - all liquid and sludge removed from tank and connecting lines
  - all piping disconnected and blanked off; valves closed and locked; and signs posted.

# What's Covered and What's Exempt

**All other containers 55 gallons or more must be addressed by the Plan!**

# Secondary Containment Requirements

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- Section 5. General Containment and Facility Drainage
- Section 6. Bulk Storage Containers, Including Portable Containers and Mobile Equipment
- Section 7. Other Particular Situations
  - Loading Racks
  - Oil/Water Separators
  - Oil-Filled Operational Equipment (now special)
  - Piping
  - Mobile Refuelers

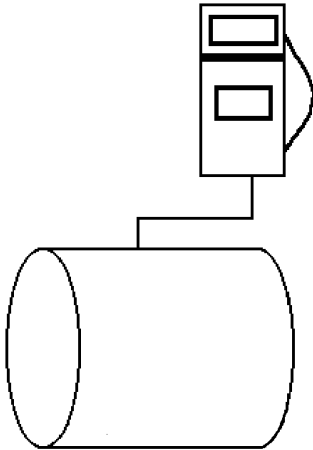
# Requirements for Bulk Storage Containers (Ch. 6)

## ➤ What's a Bulk Storage Container?

Aboveground Tanks

Underground Tanks

Drums and Totes



# Requirements for Bulk Storage Containers (cont.)

What's a Bulk Storage Container?

Equipment Fuel Cells

Storage Compartments on Fuel Delivery Trucks



# Requirements for Bulk Storage Containers (cont.)

## Specific Requirements for Bulk Storage Containers

- 100% secondary containment plus “sufficient freeboard for precipitation” (except for mobile refuelers)
- “Regular” visual inspections
- Management of rainwater accumulation in diking
- Integrity inspections - more later on this
- “Fail-safe engineering” for overfill prevention
- Corrosion protection (underground tanks & piping)

# General Containment Requirements (Ch. 5)

- Apply to all other equipment and areas where oil is handled:
  - transfer areas
  - oil-filled operational equipment
  - mobile refuelers
  - piping
- Does not have to contain 100% - only “appropriate to prevent a discharge”
- Any method listed 112.7(c) can be used, including facility drainage system

# Facility Drainage System Requirements (Ch. 5)

- Design to flow into ponds, lagoons or catchment basins designed to retain oil and return it to the facility or equip the final discharge with a diversion system that would retain oil inside the facility. (40 CFR 112.8(b))
  - Applies only if the drainage system is used to meet the secondary containment requirements.

# Oil-Filled Operational Equipment (in Ch. 7)

- Equipment that includes an oil storage container in which the oil is present solely to support the function of the device.
- Examples:
  - lubricating systems
  - hydraulic systems
  - heat transfer systems
  - transformers



# Oil-Filled Operational Equipment (cont.)

- Qualified oil-filled operational equipment:
  - no single discharge from any oil-filled operational equipment of 1,000 gallons or more or two discharges exceeding 42 gallons or more within any 12-month period in the last 3 years.
- Not subject to the secondary containment requirements of 112.7(c) IF the Plan
  - establishes inspection procedures
  - includes an oil spill contingency plan and written commitment of manpower, equipment, and materials (unless you have submitted an FRP)

# Conducting an SPCC Site Inspection (Ch. 3)

- Section 3. Site Inspection and Fault Analysis
- Inspection worksheets for
  - Aboveground Tanks and Piping
  - Underground Tanks and Piping
  - Mobile Refuelers
  - Oil/Water Separators
  - Oil-Filled Operational Equipment
  - Mobile or Portable Containers
- All information is necessary to document compliance.

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GO TO GUIDEBOOK


## Fault Analysis Methodology (Ch. 3)

- SPCC Plan must address potential total quantity, direction and rate of flow for each equipment failure scenario “where experience indicates a reasonable potential for equipment failure.” (67 FR 47100)
- *Whose experience?*
  - Experience not only of your facility, but the industry in general
- *“Reasonable potential?”*
  - No need to address failures that would in all foreseeable scenarios be contained before reaching navigable water

# Fault Analysis Methodology (cont.)

## Fault Analysis Worksheet

- For each container:
  - Type of Failure
  - Rate of Flow
  - Potential Quantity
  - Direction of Flow
  - Probability & Severity
  - Discharge Prevention
  - Discharge Control



The image shows a screenshot of a 'FAULT ANALYSIS WORKSHEET' table. The table has a blue header with the following columns: 'CONTAINER', 'TYPE OF FAILURE', 'RATE OF FLOW', 'POTENTIAL QUANTITY', 'DIRECTION OF FLOW', 'PROBABILITY & SEVERITY', 'DISCHARGE PREVENTION', and 'DISCHARGE CONTROL'. The table contains several rows of data, with some cells containing numerical values and others containing text descriptions of failure modes and their consequences.

CONTAINER	TYPE OF FAILURE	RATE OF FLOW	POTENTIAL QUANTITY	DIRECTION OF FLOW	PROBABILITY & SEVERITY	DISCHARGE PREVENTION	DISCHARGE CONTROL
...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...
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# Fault Analysis Methodology (cont.)

## Discharge Prevention

- Level gauge
- Inspections

## Discharge Control

- Containment (passive)
- Deployment of absorbents (active)



# Environmental Equivalence (Ch.9)

- Deviations are allowed for some requirements if environmentally equivalent measures are demonstrated.
  - Security
  - Loading/Unloading Racks except for secondary containment
  - Facility drainage
  - Bulk Storage Containers except for secondary containment
  - Transfer operations

## Environmental Equivalence (cont.)

- Must demonstrate:
  - the SPCC rule is inappropriate
  - the reason(s) it is inappropriate
  - that environmentally equivalent protection can be achieved
  - that the alternate design is adequate, represents good engineering practice, and will be adequately maintained.
  
- Example: Single-use containers and Shop-built tanks < 30,000 gal. (p. 42)

# Impracticability Determinations (Ch.10)

- Where secondary containment is impracticable due to
  - geographic limitations
  - fire codes (distance from property line)
  - local zoning codes (height of wall)
  - safety reasons
  - other good engineering reasons.

## Impracticability Determinations (cont.)

- Show an alternate method of compliance:
  - oil spill contingency plan;
  - written commitment of manpower, equipment, and materials; and
  - increased frequency or more rigorous type of integrity testing.

# For more information

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USEPA

<http://www.epa.gov/oilspill/>

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