

# SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) AND FACILITY RESPONSE PLAN (FRP) RULE 40 CFR 112

## 2019 FEDERAL ENVIRONMENTAL SYMPOSIUM



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Oil & Prevention Branch  
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U.S. Environmental Protection Agency



# Rule Summary

- Originally published in 1973 under the authority of § 311 of the Clean Water Act, the Oil Pollution Prevention regulations set forth requirements for:
- The prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities.
- The goal of this regulation is to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil.



# What does the SPCC rule require?

- Requires facilities to develop and implement a **site-specific SPCC Plan** to address:
  - Procedures to *prevent* oil discharges (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).



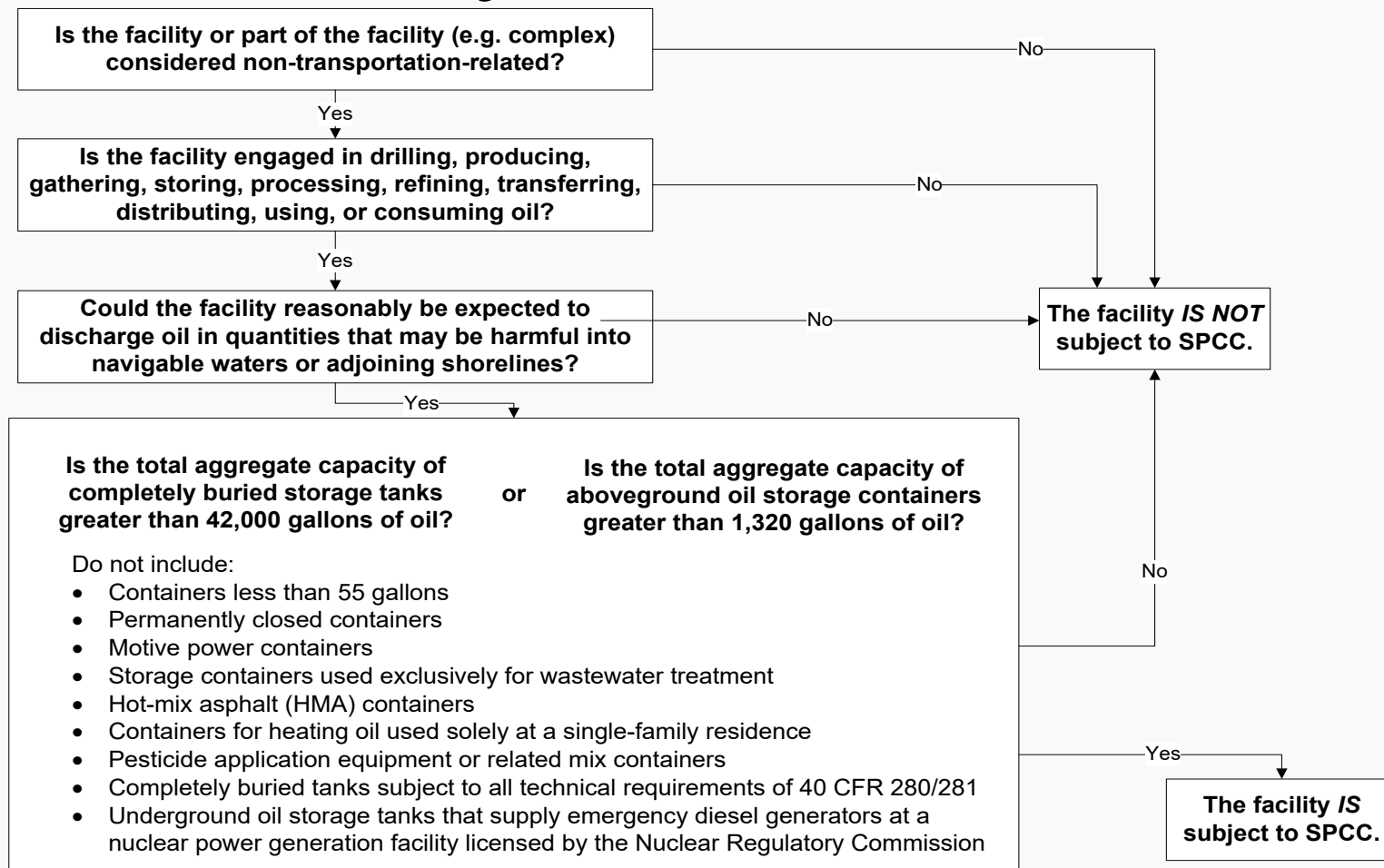
# Which facilities need an SPCC Plan?

- Non-transportation related facilities
- Total aboveground storage is greater than 1,320 gallons (*using a minimum container size of 55 gallons*)
- Due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.
- Total underground storage is greater than 42,000 gallons, except completely buried storage tanks subject to all of the technical requirements of the UST regulations (*40 CFR Parts 280 and 281*).





# Who is subject to the SPCC Rule?





# What do facilities have to do?

- Use containers suitable for the oil stored
- Provide overfill prevention
- Provide general secondary containment to catch the most likely oil spill where you transfer oil to and from containers and/or tanker trucks.
- Provide sized secondary containment for bulk storage containers that holds the full capacity of the container plus possible rainfall. A double-walled tank may also suffice.
- Train oil handling personnel



# What do facilities have to do?

- Visually inspect aboveground pipes and oil containers periodically
- Test or inspect each container for integrity on a regular schedule.
- Buried pipes need to be leak tested when they are installed or repaired.
- Prepare and implement an SPCC Plan:
  - List each container with type of oil and its storage capacity
  - describe oil handling operations
  - spill prevention practices
  - discharge controls
  - personnel, equipment and resources to prevent oil spills to navigable waters.



# The SPCC plan:

## Should clearly address:

- Operating procedures to prevent the occurrence of oil discharges.
- Control measures to prevent a discharge from entering navigable waters.
- Countermeasures to contain, clean up, and mitigate the effects of an oil discharge that impacts navigable water.
- Description and diagram of the layout of the facility



## Must be:

- Prepared in accordance with good engineering practices.
- Certified by a Professional Engineer or self-certified (Qualified Facility)
- Implemented by the owner or operator.



# SPCC Plan Key Elements

- Name of Facility
- Type of Facility
- Date of Initial Operation
- Location of the Facility
- Name and Address of Owner
- Designated Person Responsible for Oil Discharge Prevention
- Type/capacity of container and oil stored
- Maps and Diagrams





# SPCC Plan Key Elements (Cont.)

- Inspection Procedures
- Personnel Training
- Loading/Unloading Rack Discussion
- Facility Drainage Procedures
- Integrity Testing procedures or alternate measures taken
- Alarms installed



# Facility Response Plans

- Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs).





# Substantial Harm

- Total oil storage capacity greater than or equal to 42,000 gallons and it transfers oil over water to/from vessels; **or**
- Has a total oil storage capacity greater than or equal to 1 million gallons and meets one of the following conditions:
  - Does not have sufficient secondary containment for each aboveground storage area.
  - Is located at a distance such that a discharge from the facility could cause "injury" to fish, wildlife, and sensitive environments.
  - Is located at a distance such that a discharge from the facility would shut down a public drinking water intake.
  - Has had, within the past five years, a reportable discharge greater than or equal to 10,000 gallons.



# FRP Key Elements

- Identify a qualified individual having full authority to implement removal actions, and require immediate communication between that person and the appropriate federal authorities and responders;
- Identify and ensure availability of resources to remove, to the maximum extent practicable, a worst-case discharge;
- Describe and implement training, testing, unannounced drills, and response actions at the facility;
- Be updated periodically and submitted to EPA.





# Oil Inspection Objective

- Compliance with 40 CFR Part 112
  - Spill Prevention, Control and Countermeasures (SPCC)
  - Facility Response Plan (FRP)
  
- 3 Areas of Evaluation:
  - Opening Conference: Facility Interviews and Documentation Review
  - Field Inspection
  - Closing Conference: Questions and Concerns/Observations



# Facility Interviews

- Facility personnel is facility manager, supervisor, or Qualified Individual (QI)
  - Use a national checklist
- Evaluating personnel...
  - Are they familiar with facility?
  - Are they familiar with procedures?
  - Are they familiar with Prevention & Response Plans?
  - Do their answers coincide with documentation, site conditions, etc.?



# Documentation

- SPCC Plan
- Integrity testing records (in-service, out-of-service, leak)
- Personnel training
- Visual inspection records (3 years)
- Dike drainage records (3 years)



- FRP
- Response equipment inspections (5 years)
- Training records (5 years)
- OSRO contract(s) (*if applicable*)
- Drill/Exercise records (5 years)





# Field Inspection

- Main Areas:
  - Storage Containers & Foundations
  - Oil-Filled Equipment
  - Piping
  - Secondary Containment
  - Loading/Unloading Racks and Transfer Areas
  - Dike Drainage
  - Security

# Field Inspection – Storage Containers and Foundations

- Overall condition of tank
- Evidence of overfill? Spill? Damage? Repairs?
- Tank foundation stable?
- Tank appurtenances overall condition





# Field Inspection – Oil Filled Equipment

- Operational or manufacturing?
- General secondary containment or alternative measure?
- Overall condition



## Field Inspection - Piping

- Properly supported?
- Minimal corrosion and/or abrasion
- Warning signs for vehicles
- If buried, cathodically protected?
- If buried, regular leak testing?



# Field Inspection – Secondary Containment

- Adequately sized
- No excessive water or vegetation
- No cracks/holes/damage
- Sufficiently impervious
- Containers placed well in containment (not too close to walls)





# Field Inspection – Loading/Unloading Racks and Transfer Areas

- Adequate sized containment
- Warning signs
- Wheel chocks, method to prevent premature departure





## Field Inspection – Dike Drainage

- Valves closed and locked
- No sheen present
- No excessive water





## Field Inspection - Security

- Valves locked
- Gates or buildings protecting starter pumps, control rooms, etc.



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24

# SPCC/FRP Inspections

## Common Field Violations



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# SPCC Common Violations

- No SPCC Plan
- SPCC Plan not implemented
- Inspections, training and/or drainage records not kept or maintained for 3 years
- Inadequate piping supports
- Inadequate or no secondary containment
- Poor housekeeping and visible discharges
- No documentation of repairs required by integrity testing



# Security

## 40 CFR 112.7(g)





## Security (cont.)







# Dike Drainage 40 CFR 112.8(b)





# Secondary Containment 40 CFR 112.8(c)(2)







## Secondary Containment (cont.)





# Bulk Storage Containers 40 CFR 112.8(c)(6)







# Bulk Storage Containers (cont.)



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# Facility Transfer Operations 40 CFR 112.8(d)







## Facility Transfer Operations (cont.)







# Facility Transfer Operations (cont.)





# Facility Transfer Operations (cont.)





# FRP Common Violations

- FRP Plan not reviewed at least every 5 years.
- If revised, updates not submitted to the regional office.
- Exercises/Drill Program not implemented
  - ✓ QI Notification Exercise
  - ✓ Tabletop Exercise
  - ✓ Unannounced Exercise
  - ✓ Equipment Deployment Exercise
- Failure to demonstrate that proper response can be conducted in a timely manner during a Government Initiated Unannounced Exercise (GIUE).





# Government Initiated Unannounced Exercises (GIUEs) Requirements

- Arrival of containment boom within one hour of detection of the discharge and subsequent successful deployment
- Arrival of oil recovery devices within two hours of detection of the discharge and subsequent successful simulated recovery
- Proper skill and competency of responders and readiness of response equipment.







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## Enforcement Tools

- Notice of Non-Compliance - very minor violations
- Administrative Civil Penalties
- Judicial Referral
- Administrative Orders – compliance work





# Common Issues Identified at Federal Facilities

- Plan
  - Frequent technical changes; SPCC plan not updated in timely manner (within 6 months)
  - Large properties; diagrams may not include all required information or sensitive information may not be displayed



## Common Issues Identified at Federal Facilities (cont.)

- Plan (cont.)
  - Various tenants on property; implementation procedures vary tenant to tenant (visual inspections, training)
  - No discussion of loading racks/oil filled equipment in plan



# Common Issues Identified at Federal Facilities (cont.)

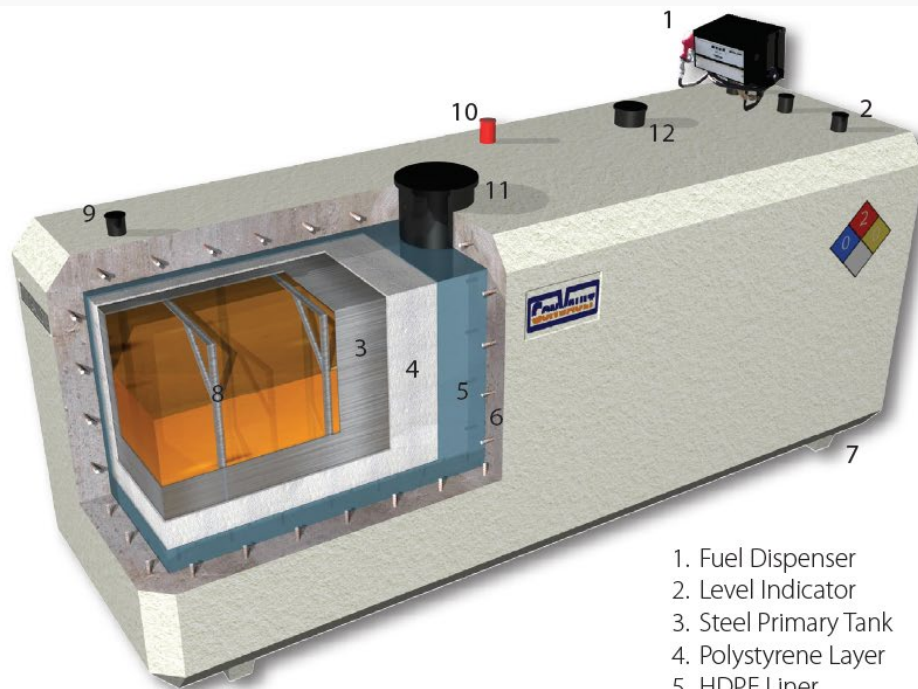
- Field
  - Access to enter property can be challenging; security
  - Records located at several different locations
  - Necessary tank repairs may take longer to address (funding issues)



# Common Issues Identified at Federal Facilities (cont.)

- Field
  - Tank integrity testing not conducted as per standards (frequency, convault tanks)
  - Not all SPCC regulated containers on-site included in plan, e.g., drum storage areas, heating oil tanks, oil-filled equipment

# Convault Tanks



- 1. Fuel Dispenser
- 2. Level Indicator
- 3. Steel Primary Tank
- 4. Polystyrene Layer
- 5. HDPE Liner
- 6. Reinforced Concrete

- 7. Support Legs
- 8. Internal Bracing
- 9. Atmospheric Vent
- 10. Leak Detector Tube
- 11. Overfill Containment
- 12. Emergency Vent



# Common Issues Identified at Federal Facilities (cont.)

- Field
  - Drainage logs not maintained
  - For FRP facilities: missing table top exercises, worst case discharge scenario, equipment deployment exercises



# Questions?

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- <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>