

# **Spill Prevention, Control and Countermeasure (SPCC)**

# History

- **Original promulgation 1973, effective 1974**
- **Codified in 40 CFR 112 (EPA Jurisdiction)**
- **Proposed rulemaking – 1991, 1993 and 1997**
- **Amended July 17, 2002**
- **EPA Inspector Guidance 2005**
- **Multiple extensions – compliance date now Nov. 10, 2010**

# **General Applicability 112.1:**

## **Regulatory threshold:**

**Raises the threshold by eliminating the 660 gallon/single container criterion.**

**Now total > 1,320 gallons**

## **Minimum container size:**

**Exempts containers less than 55 gallons from capacity calculation.**

# Exemptions

**The rule exempts completely buried tanks that are subject to all technical requirements of the Underground Storage Tank rules at (40CFR part 280 or 281).**

# **New Definitions Section 112.2:**

- **Facility**
- **Storage Capacity**
- **Oil**
- **Permanently Closed Container**

## **Facility:**

**Any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and waste treatment, or in which oil is used...(may be as small as a piece of equipment or as large as a military base).**

**Storage Capacity:**  
**Means the shell capacity.**

## **Oil**

- Mean oil of any kind or in any form, including, but 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, oil refuse or oil mixed with wastes other than dredged spoils.**
- Examples provided in preamble of final rule: asphalt, gasoline, fuel oils, mineral oil, naphtha, sludge, oil refuse, and oil mixed with wastes other than dredge spoil.**



# **Permanently closed containers:**

**No sludge, no liquid, no piping connections, closed/locked valves and signs indicating closure date.**

# **Section 112.3**

**PE must certify SPCC Plan is prepared in accordance with Part 112 and must consider applicable industry standards.**

**The rule will allow a professional subordinate to conduct the site visit in place of the PE, but the PE must review the subordinate's work and certify the Plan.**

**PE certification not required for non-technical amendments.**

# Section 112.4

## Submission of SPCC Plan to Regional Administrator:

### Whenever facility has discharged:

- More than 1,000 gallons; or
- More than 42 gallons in each of two discharges in any 12-month period.

RA may require amendments after on-site review Plan.

# **Section 112.5**

**Amendment by Owner / Operator:**

**Review Plan at least once every 5 years**

**P.E. must certify only technical amendments.**

# **Trigger for SPCC Amendment (§112.5(a))**

- **Change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in §112.1(b)**
- **Examples:**
  - **Commissioning or decommissioning containers**
  - **Replacement, reconstruction, or movement of containers or piping systems**
  - **Construction demolition that might alter secondary containment structures**
  - **Certain changes of product or service**
  - **Revision of standard operation / maintenance procedures**

# Format of SPCC Plan (§112.7)

- **Old rule: Required that a Plan follow the sequence specified in the rule and discuss the facility's conformance with the requirements**
- **Revised rule: Allows alternative formats for a Plan, provided that the owner / operator cross-reference its provisions to the requirement listed in the SPCC rule**
- **API Bulletin D16**

# Deviations:

**The rule will allow waivers for most provisions, provided the owner or operator explains the reasons for nonconformance in the Plan and provides equivalent environmental protection. (Not applicable to secondary containment)**

**RA may not agree and require amendment of the Plan**

## **Facility Diagram:**

**Required; must mark location and contents of each container (including exempt USTs and all piping).**

## **Business Records:**

**Allows an owner or operator to use “usual and customary” business records as a record of tests and inspections.**



## **Brittle fracture evaluation:**

**The rule requires evaluations for field-constructed aboveground storage containers undergoing repair, alteration, or change in service.**

## **Employee training:**

**Limits training requirements to oil-handling employees.**

# Secondary Containment

- **Provide secondary containment for largest container**
  - **Shell Capacity**
  - **Subtract footprints of smaller tanks**
  - **Proved sufficient freeboard**
  - **Needs to be documented in plan**

# Examples of Secondary Containment

## Passive Measures

- **Dikes, berms, or retaining walls sufficiently impervious to contain oil**
- **Curbing**
- **Culverting, gutters, or other drainage systems**
- **Weirs, booms, or other barriers**
- **Spill diversion ponds**

## Active Measures (when passive measures are not feasible)

- **Sorbent materials**
- **Drain covers, closing gate valves**

# Sufficiently Impervious



- **Revised Rule**

- The **walls and floor** of the containment must be capable of containing oil and must be constructed so that any discharge from a tank or pipe will not escape containment **before cleanup occurs.**

- **Significant Impact**

- Although not specifying a permeability factor, containment systems **must be capable of containing discharged “oil” until the time at which cleanup occurs.** The language specifically references both the horizontal (walls) and the vertical (floor) containment.

- **Document in the Plan**

# Overflow Protection

- **High liquid level alarms**
- **High liquid level pump cutoff devices**
- **Direct audible or code signal between gauger and pumping station**
- **Fast response system to determine level**
- **Regulatory test liquid level sensing devices**

# **Loading / Unloading Racks**

- **A Loading / Unloading Rack is a facility to load or unload tank trucks or tank cars**
- **Subject to specific requirements under 112.7(h)**
  - **Secondary containment for largest compartment**
  - **Inspections**
  - **Wheel chocks or brake interlock system**

# Transfer Areas

- **Oil transferred at areas where no loading or unloading rack is present are subject to §112.7(c)**
- **Appropriate containment and / or diversionary structures are required**
- **Containment size for oil transfers are not specified but must be based on good engineering practice using most likely discharge scenario (e.g., hose rupture, drips at connections, overfill)**

# Professional Engineer Certification

- Revised rule
  - By certification, the PE attests that:
    - They are **familiar** with the requirements of the SPCC rule;
    - They or their **agent** has visited and examined the facility;
    - The Plan has been prepared in accordance with good engineering practice, including **consideration of applicable industry standards**, and with the requirements of the SPCC rule;
    - **Procedures for required inspections and testing have been established**; and
    - The Plan is **adequate** for the facility.



# **Training (§112.7(f))**

- **Conduct training for only oil handling personnel in the operation and maintenance of equipment to prevent oil discharge.**
- **Schedule and conduct discharge prevention briefing for oil handling personnel at least once a year. The requirement to designate a person at each facility stays the same.**

- **Section 112.8 – Onshore Facilities, excluding production facilities:**
- **Allows NPDES records to be used.**
- **Requires integrity testing on a regular schedule, or after material repairs, must combine visual with other methodology.**
- **Requires buried piping to have protective wrapping, coating and cathodic protection if installed after 8/16/02.**

# **Section 112.9**

## **Onshore Oil Production Facilities:**

**Clarifies that all tank battery, separation and treating installations must have secondary containment for entire capacity of largest single container and sufficient freeboard to contain precipitation.**

# **Section 112.12**

**Requirements for Animal Fats, Oils and Greases; Fish and Marine Mammal Oils; and Vegetable Oils.**

# **EPA SPCC Guidance for Regional Inspectors**

- **EPA published the SPCC guidance document for its regional inspectors in December 2005**
- **The guidance document provides significant information on plan preparation and how to comply with the SPCC Rule requirements.**
- **The guidance document is available at the following internet site:**
  - **<http://www.epa.gov/oilspill/guidance.htm>**

# Potential Issues Identified During Site Reviews

- **Facility diagrams**
- **Inconsistencies between FRP and SPCC Plan**
- **Incomplete tank list**
- **Idle tanks - out of service vs. permanently closed**
- **Tank content descriptions (generic vs. specific)**
- **Tank shell capacities (strapping charts)**
- **Tank integrity testing program - all tanks**
- **Secondary containment capacities for tank dike areas - documentation and calculations for every containment area**
- **Sufficiently impervious determination & documentation**

# Potential Issues (con't)

- **Mobile / transportation related equipment - generators, portable lights, vacuum trucks**
- **Drum storage areas - garage, satellite areas, warehouses (storage vs. drums in use)**
- **Process vessels**
- **Operational equipment**
- **Electrical equipment**
- **Rental / leased operational/mobile equipment - owner/operator responsibility**
- **USTs**
- **Exemption for Tanks in wastewater service - except recovered oil and slop oil tanks**

# Potential Issues (cont'd)

- **Piping outside containment areas**
- **Aboveground piping inspections**
- **Buried piping inspections when exposed**
- **Corrosion protection of buried piping - documentation**
- **Out of service and abandoned piping - labeling and closure**
- **Jurisdiction between USEPA vs. USCG vs. DOT piping**
- **Oil versus non-oils**
- **Racks versus areas**
- **Adequate spill containment volume for racks**



# Potential Issues (cont'd)

- **Documentation and recordkeeping – signed:  
paper vs electronic**
- **SPCC training**
- **State requirements**

# **EPA INSPECTION - DOCUMENTS REVIEWED AT TIME OF INSPECTION**

- **Availability of plan and signatures**
- **Tank list**
- **Facility diagram**
- **Inspection logs including:**
  - **Tanks**
  - **Tank HLAs**
  - **Secondary containment**
  - **Piping**
  - **Facility Personnel training**
  - **Discharge Prevention Meeting Logs**
- **Full review dates**

**Note: EPA uses checklist from Inspector Guide**

# **Most Common Deficiencies Found During Plan Reviews**

- **Tanks are missing**
- **Improper cross referencing**
- **Plan is not complete**
- **Lack of documentation for secondary containment and sufficiently imperviousness**

# **Most Common Deficiencies Found During Field Inspections**

- **Employees are not familiar with SPCC**
- **Piping outside of containment not identified**
- **Oil filled equipment without containment**
- **Tank foundations integrity and housekeeping (water, soil, corrosion)**
- **Dike integrity and housekeeping (cracks, debris, holes, pooled oil, deep rooted plants, valves left open)**
- **Missing tank inspections**
- **No closure documentation on tank findings**