NPCA

Nebraska Petroleum Marketers & Convenience Store Association

# SPCC

# SPCC Rule/Regulation – What Will Be Covered

- Overview of  the Oil Pollution Prevention Rules,
- Who Needs an SPCC Plan,
- Requirements for Preparing, Implementing and Changing an SPCC Plan,
- Inspections, Tests, and Records
- Training Requirements,
- Security Requirements
- Loading/Unloading Area,
- Facility Drainage,
- Bulk Storage Containers,
- Secondary Containment/Dikes, Berms, etc.,
- Transfer and Process Operations: pipes and pumps,

# Oil Pollution Prevention

- Published in the Federal Register on July 17, 2002
- Became effective August 16, 2002
- Title 40 Code of Federal Regulations, Part 112
- Requires certain oil storage facilities to prepare a Spill Prevention, Control and Countermeasures Plan or SPCC Plan

# SPCC Applicability (112.1)

- Non-Transportation-Related Facility engaged in:
- **Drilling, producing, gathering, storing,** processing, refining, transferring, distributing, or consuming
- **Oil** of any kind (petroleum, vegetable, animal, synthetic)
- in:
  - **Total** aboveground storage capacity **>1,320 gallons** counting only containers 55 gallons and greater; and/or
  - Total underground capacity **> 42,000** gallons not including capacity of buried tanks covered in 40 CFR part 280 or 281
  - Exempts wastewater treatment facilities

# SPCC Applicability (112.1) continued

- A discharge of oil from the facility could reasonably be expected to reach **waters of the U.S.,**
- Dikes, equipment, and other manmade structures **are not considered** as reasons that oil would not be expected to reach waters of the U.S.,
- Examples of waters of the U.S. may include: lakes, rivers, streams, dry creek beds, ditches, wetlands, and tributaries to these.

# SPCC Requirements for Preparation and Implementation (112.3) (original dates)

- **Facilities Prior to August 16, 2002 –** Must have a revised plan within six months of 8/16/02. The revised plan must be implemented by 8/18/03.
- **Facilities after August 16, 2002** – Must have a plan and the plan must be implemented prior to 8/18/02.
- **Facilities after August 16, 2003** – Must prepare and implement SPCC plan before beginning operations.

# SPCC Requirements for Preparation and Implementation (112.3) (next dates)

- **Facilities Prior to August 16, 2002 –** Must have a revised plan by **8/17/04**. The revised plan must be implemented by **2/18/05**.
- **Facilities after August 16, 2002 through February 18, 2005** – Must have a plan and the plan must be implemented prior to 2/18/05.
- **Facilities after February 18, 2005** – Must prepare and implement SPCC plan before beginning operations.

# SPCC Requirements for Preparation and Implementation (112.3) (newer dates)

- **Facilities Prior to August 16, 2002 –** Must have a revised plan by **8/17/05**. The revised plan must be implemented by **2/18/06**.
- **Facilities after August 16, 2002 through February 18, 2006** – Must have a plan and the plan must be implemented prior to 2/18/06.
- **Facilities after February 18, 2006** – Must prepare and implement SPCC plan before beginning operations.

# SPCC Requirements for Preparation and Implementation (112.3) (current dates)

- **Facilities Prior to August 16, 2002 –** Must have a revised plan by **2/17/06**. The revised plan must be implemented by **8/18/06**.
- **Facilities after August 16, 2002 through August 18, 2006** – Must have a plan and the plan must be implemented prior to 2/18/06.
- **Facilities after August 18, 2006** – Must prepare and implement SPCC plan before beginning operations. (as of 8-11-04)

# SPCC Requirements for Preparation and Implementation (112.3) continued,

- Professional Engineer (PE) must certify:
  - Is familiar with the rule
  - PE or agent has visited and examined the facility
  - Plan is prepared in accordance with good engineering practice (considering applicable industry standards) and with the rule
  - Testing and inspection procedures are established
  - The plan is adequate for the facility

# SPCC Requirements for Preparation and Implementation (112.3) continued,

- Plan must be kept at nearest manned facility
- Plan must be provided to the inspector during normal working hours
- The Regional Administrator can extend time for plan preparation or amendment if requested in writing

# Plan Amendments by EPA (112.4)

- The Facility must make a written report to EPA within 60 days when:
  - There is a reportable spill >1,000 gallons, or
  - There are 2 reportable spills >42 gallons in a year,
- The facility must provide the same information to the State Agency
- EPA, with input from the State, may then require that the plan be amended

# Plan Amendments by Owner/Operator (112.5)

- The Facility must amend a plan whenever there is a physical change affecting the potential for a spill such as taking down or adding tanks, wells, etc.,
- The Facility must review the plan every 5 years,
- The Facility must document the 5 year review and amend the plan to include more effective prevention technology
- Technical amendments must be re-certified by a Professional Engineer,
- Changes in phone numbers, names, etc don't need an amendment or Professional Engineer re-certification.

# General Requirements for Preparation and Implementation [112.7(a)]

- Plan must be **signed by owner/operator**,
- Plan must follow the sequence of the rule (112.7) or cross reference,
- Equivalent environmental protection
- Must have detailed facility diagram
- Describe prevention and countermeasures
  - Type of oil and capacity of each container
  - Prevention measures provided for all oil handling and storage
  - Discharge or drainage controls
  - Countermeasures, disposal, and reporting a discharge

# General Requirements for Preparation and Implementation [112.7(b-c)]

- Plan must have a spill prediction section describing **what would be a likely cause of a spill** and where it would flow,
- Plan must describe **what containment is used** such as:
  - Dikes or berms that are **sufficiently impervious** to contain spilled oil until it is cleaned up,
  - Curbing, culverting, gutters or other drainage,
  - Weirs, booms or other barriers,
  - Spill diversion or retention ponds.

# General Requirements for Preparation and Implementation [112.7(d)]

- If a facility can't physically put in dikes or other containment they can:
  - Explain why they can't,
  - Conduct integrity testing of tanks and leak testing of pipes and valves
  - Develop a contingency plan (response plan) following 40 CFR 109, or FRP
  - Show a written commitment of manpower and equipment to stop a spill and clean it up.

# Inspection, tests and Records [112.7(e)]

- Records must be made according to the frequency and procedures that the facility establishes in the SPCC plan,
- Sign and keep with the plan for 3 years,
- Records must include:
  - Tank, piping, valve inspections and testing,
  - Water drained from dikes,
  - SPCC plan 5 year review,

# Personnel and Training Requirements [112.7(f)]

- Owners/operators must conduct training for employees on equipment and spill prevention and response procedures,
- The facility must designate a person responsible for SPCC requirements,
- Conduct and document periodic briefings on recent problems and new spill prevention measures.

# Security Requirements [112.7(g)]

- The facility must be fenced unless attended 24-hours/day,
- Master flow and drain valves on tanks must be secured in the closed position when not in use,
- Pump starter controls must be locked and in a location only accessible to authorized personnel,

# Security Requirements [112.7(g)] continued

- Loading/unloading connections must be capped when not in service,

- The facility must have adequate lighting to detect and cleanup spills at night and deter vandalism.

# Loading and Unloading Areas [112.7(h)]

- Secondary containment must be provided for the capacity of largest compartment of tank car or tank truck such as:
  - Quick drainage system
  - Catchment basin or treatment system
  - Curbing,
  - Diversion into tank secondary containment,
  - Trenches, sumps, USTs, etc.

# Loading and Unloading Areas [112.7(h)], continued

- There must be a system to prevent trucks from departing prematurely, such as:
  - interlocked warning light or physical barrier,
  - wheel chocks or warning signs,
  - vehicle brake interlock system
- Vehicles must be inspected for leaks before departing.

# Brittle Fracture Evaluation for Field Constructed Tanks [112.7(i)]

- Evaluate brittle fracture and take appropriate action if the container undergoes the following:
  - Repair
  - Alteration
  - Reconstruction
  - Change in service
- American Petroleum Institute (API) Standard 653 or other appropriate standard

# Discussion of Conformance to Oil Pollution Prevention Rules [112.7(j)]

- Discuss conformance with the rules in the SPCC plan

- Discuss conformance with any applicable more stringent State rules, regulations, and guidelines

# Subpart B – Requirements for Petroleum Oils and Non-Petroleum Oils [112.8, 112.9, 112.10, & 112.11]

- Excludes Animal Fats and Oils and Greases
- Excludes Vegetable Oils
  - Including oils from seeds, nuts, fruits, and kernels
- Subpart B covers requirements for:
  - Onshore facilities (excluding production)
  - Onshore production facilities
  - Onshore oil drilling and workover facilities
  - Offshore oil drilling, production, or workover facilities

# Onshore Facility Drainage (excluding production) [112.8 (a-b)]

- Must meet all of the requirements in 112.7
- Diked areas must be controlled with manual valves or pumps,
- No flapper-type valves,
- Valves must normally be closed,
- Inspect water before draining from dikes, any oil must be removed,
- Records of water drainage must be kept,

# Onshore Facility Drainage (excluding production) [112.8 (b)] continued

- Undiked areas with sources of oil must drain to a catchment basin or lagoon or,
- Be diverted back to the facility in the event of a spill,
- If drainage water is treated, the system must be engineered to prevent oil from reaching waters of the U.S. in the event of equipment failure or human error.

# Bulk Storage Tank Requirements [112.8(c)]

- Tank's material must be compatible with the oil stored and conditions of storage,
- Secondary containment must:
  - Hold the entire contents of the largest tank,
  - Plus sufficient freeboard for rainfall,
  - Be sufficiently impervious to hold a spill until it can be detected and cleaned up,
  - Be free of vegetation that would compromise imperviousness and inhibit inspections,

# Bulk Storage Tank Requirements [112.8(c)], continued

- Water must be drained from the diked areas so that there is enough capacity to hold the contents of the largest tank,
- Any oil on the water must be removed first,
- Records should be kept when water is drained from diked areas,
- Buried and partially-buried or bunkered tanks must have corrosion protection,

# Bulk Storage Tank Requirements [112.8(c)], continued

- Tanks and supports must be periodically inspected and tested for integrity,
- Integrity testing should include visual inspection combined with a non-destructive test method and comparison records kept,
- Testing and inspections should conform to appropriate engineering standards,
  - American Petroleum Institute Standard 653
  - Steel Tank Institute Standard SP001-00

# Bulk Storage Tank Requirements [112.8(c)], continued

- Leaks from internal heating coils must be controlled,
- At least one fail-safe design feature must be present and regularly tested:
  - High liquid level alarms or pump cutoffs,
  - Direct communication between tank gauger and pumping station,
  - Fast response system like direct vision gauges, digital computers, or telepulse

# Bulk Storage Tank Requirements [112.8(c)], continued

- Facilities with effluents must inspect the system frequently for upsets,
- Visible leaks must be promptly corrected and oil removed from secondary containment,
- Mobile or Portable tanks must have secondary containment.

# Transfer Operations, Piping & Pumping [112.8(d)]

- Buried piping installed or replaced after 8/16/02 must be coated, wrapped, and cathodically protected or satisfy the corrosion requirements under 40 CFR parts 280 or 281,
- Exposed buried line must be inspected for deterioration and corrected as appropriate,
- Out-of-service pipes must be labeled as to origin and capped or blank-flanged,
- Pipe supports must be designed to minimize corrosion and abrasion and allow for expansion,

# Transfer Operations, Piping & Pumping [112.8(d)], continued

- Aboveground piping, valves, and appurtenances must be inspected regularly and the general condition assessed,

- Buried pipes must be leak tested at the time of installation, modification, construction, relocation, or replacement,

- Pipes must be protected from vehicular traffic with warnings, signs or physical barriers.

# Onshore and Offshore Production and Drilling and Workover Facilites

- Section 112.9 applies to onshore oil production facilities only
- Section 112.10 applies to onshore drilling and workover facilities only
- Section 112.11 applies to offshore drilling, production, or workover facilities only

# Subpart C – Requirements for Animal Fats and Oils and Greases and Fish and Marine Mammal Oils; and for Vegetable Oils

- Excludes petroleum oils and other non-petroleum oils
- Includes oils from seeds, nuts, fruits, and kernels
- Subpart C covers requirements for:
  - [112.12] Onshore facilities (excluding production)
  - [112.13] Onshore production facilities
  - [112.14] Onshore oil drilling and workover facilities
  - [112.15] Offshore oil drilling, production, or workover facilities
- No difference between Subpart B and Subpart C

# Attachments

- FRP applicability checklist,
- Maps showing tanks, piping, loading areas, and where spills would flow if they got outside secondary containment,
- Secondary containment calculations,
- Records.

# Cost of Compliance versus Spill Cleanup

- Original purchase and installation of 10,000 gallon tank in 1993 cost between $21,000 to $21,850 including:
  - Secondary containment,
  - Preparation of SPCC Plan,
  - Record keeping,
  - Assumes only cleanup of spills within secondary containment will be needed over the life of the tank,
- One time cleanup of 1,000 gallon spill that reaches waters of the U.S. can cost $30,000
  - Does not include penalties.

# FRP Applicability

- **Non-Transportation-Related facilities that store oil of any kind and conduct over-the-water transfers and store more than 42,000 gallons of oil**

**<u>OR</u>**

# FRP Applicability (continued)

- **Non-Transportation-Related facilities that have a total oil storage capacity of more than 1 million gallons and one or more of the following applies:**
  - **Facility does not have adequate secondary containment,**
  - **Facility is located at a distance such that a discharge could cause injury to fish, wildlife, or sensitive environments,**
  - **Facility is located at a distance that a discharge would shut down a drinking water intake,**
  - **Facility has had a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years,**

# Substantial or Significant and Substantial Harm Facility Requirements


- **Substantial Harm Facilities**
  - **Must prepare and submit FRP to EPA,**
- **Significant and Substantial Harm Facilities**
  - **Must prepare and submit FRP for review and approval by EPA.**

# Spill Notification Contacts

- **Local Emergency Planning Committee**
- **National Response Center:**
  **(800) 424-8802**
- **EPA Region 7, 24-hr Spill Line:**
  **(913) 281-0991**
- **NDEQ: (402) 471-2186  IDNR: (515) 281-8694**
  **MDNR: (573) 634-2436  KDHE: (785) 296-1679**

# What do I do now?

- Hire a registered Professional Engineer
- Develop an SPCC Plan
- Construct secondary containment
- Implement the SPCC Plan

# Need More Info?

- **Website:** www.epa.gov/oilspill
- **National Hotline: 1-800-424-9346**
- **Regional Contacts:**

  **Bob Webber…….913-551-7251**

  **Alan Hancock……913-551-7647**

# Where are you now?

1. Do you have an SPCC plan in place for each facility?

2. Do you have adequate containment?
   A. For tanks?
   B. For loading and unloading?

# NO PLAN?

1. Write your own plan and hire a PE to review and certify the plan.

2. Hire PE to write the entire plan.

3. Anything in between 1 & 2.

# Cost?

**It depends.**

# Secondary Containment

**Tanks**

**Able to hold released product until it can be expected to be discovered and cleaned up.**

**Largest tank plus freeboard**

**110% of largest tank should be adequate for most of Kansas.**

**1 gallon = 231 cubic inches or 7.48 gallons per cubic foot**

# Secondary Containment

- Loading and unloading areas.
  - Does not have to be impervious.
  - Large enough to hold largest compartment on transport vehicle.
  - 80’ X 10’ X 6”  would hold approximately 3,000 gallons
  - Can use tank containment, diversion ponds, ect. to meet this requirement.

# Areas of Concern

Integrity testing of tanks

Cost?!!!!!

Definition of Load\unload area