ANATOMY OF AN SPCC PLAN

A Purposed Approach

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OBJECTIVE

- Explore Use of SPCC Plan for Purposes Beyond Regulatory Requirements
INQUIRY / EXAMINATION

- SPCC Regulation Origins
- Key Definitions, Requirements & Concepts
- Data & Information Collection Considerations
ITEMS NOT DISCUSSED

- Transportation Related Facilities
- Offshore Facilities
- Production Facilities

See Definitions at 40 CFR §112.2
SPCC Regulation Origins

Long & Complex Path to Current Regulations

Rivers & Harbors Act – 1899: Oldest Federal Environmental Law in U.S.

Section 10 "All waters subject to the ebb and flow of the tide (tidal action) are navigable waters of the US".
SPCC Regulation Origins

Federal Water Pollution Control Act - 1948

Federal Water Pollution Control Act Amendments - 1972 (known as Clean Water Act or “CWA”)
SPCC Regulation Origins

Legal Authority: Section 311(j)(1)(C) as Amended by Oil Pollution Act (OPA) of 1990

Addresses Control of Oil and Hazardous Substance Discharges & Grants Authority To Promulgate Regulations to Prevent, Prepare for, and Respond to Discharges.
SPCC Regulation Origins

SPCC Rule – Originally Promulgated in 1973
Numerous Amendments and Revisions
SPCC Regulation Origins

January 1988
Brittle Fracture Failure - Floreffe, PA
3.8MM Gallons Diesel Fuel Released
Impacts to
• Monongahela & Ohio Rivers
• Drinking Water Sources
• Private & Business Properties
April 1988
≈ 400k Gallons of Crude Oil Released-Martinez, CA
Impacting Freshwater & Saltwater Marshes, Shorelines, Three Marinas, Two Local Parks, and Waterfront Properties along Suisun Bay, and Carquinez Straight in San Francisco Bay System
SPCC Regulation Origins

Following 1988 Spill Events, EPA Formed SPCC Task Force to Examine Regulations of Oil Spills from Above Ground Storage Tanks (ASTs).

Resulting in SPCC Rule Amendments of 2002
SPCC Regulation Origins

Most Recent Amendments

November 2009 (Various Revisions from 2004 – 2006)

April 2011 (Milk Exemption)
### 40 CFR part 112

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BCA Environmental Consultants LLC
DEFINITIONS-REQUIREMENTS-CONCEPTS

- Bulk Storage Container
- Discharge
- Loading/Unloading Rack
- Navigable Waters
- Oil
- Oil-Filled Operational Equipment
- Owner / Operator
- Permanently Closed
DEFINITIONS-REQUIREMENTS-CONCEPTS

- Secondary Containment
  - Sized Secondary Containment
  - General Secondary Containment
- SPCC Plan
- Storage Capacity (of container)
DEFINITIONS-REQUIREMENTS-CONCEPTS

Applicability

• Non-Transportation Related

• Aboveground Oil Storage Capacity of more than 1,320 U.S. Gallons

• Completely Buried Oil Storage Capacity of more than 42,000 U.S. Gallons*
Applicability

- Reasonable expectation for discharge of Oil to navigable waters or adjoining shorelines on potentially harmful quantities.
Exemptions

• Completely buried USTs subject to all technical requirements of 40 CFR Part 280 or an approved State Program pursuant to 40 CFR Part 281.

• Storage Containers with a capacity of less than 55 U.S. Gallons
DEFINITIONS-REQUIREMENTS-CONCEPTS

Exemptions

- Facility with completely buried oil storage capacity of 42,000 U.S. gallons or less and aggregate aboveground oil storage capacity is 1,320 U.S. gallons or less

- Permanently closed oil containers
Exemptions

- Wastewater Treatment Operations
- Motive Power Oil Containers
DEFINITIONS-REQUIREMENTS-CONCEPTS

Exemptions

• Hot-Mix Asphalt or any Hot-Mix Asphalt Container

• Heating Oil Containers at single-family residence
Exemptions

- Pesticide application equipment or mix containers
- Milk and milk product containers and associated piping/appurtenances
DEFINITIONS-REQUIREMENTS-CONCEPTS

Options?

- Environmental Equivalence
- Impracticability
Contents

Plan Administration:

Management Approval, PE Certification; Plan Maintenance and Review, Plan Location, Facilities, Procedures, Methods, or Equipment not yet Fully Operational; SPCC Cross Reference, etc.
Facility Information:

Description, Location & Activities, Oil Storage, Discharge Potential, Distance to Navigable Waters, Discharge History, etc.
Discharge Prevention – General Provisions:

Compliance w/Applicable Requirements, Facility Diagram, Spill Reporting, Potential Discharge Volumes/Flow Direction,
Contents

Discharge Prevention – General Provisions:

Containment/Diversionary Structures, Practicability of Secondary Containment, Inspections, Tests, Records, Personnel Training, Discharge Prevention, Procedures, Security, etc.
Discharge Prevention – Onshore Facilities:

Facility Drainage, Bulk Storage Containers, Transfer Operations, etc.
Contents

Discharge Response:

Minor Discharge, Major Discharge, Waste Disposal, Discharge Notification, Clean Up Contractors and Equipment Suppliers
Data & Info

Storage Container Information:

Above Ground Storage Tanks (ASTs)
Underground Storage Tanks (USTs)
Mobile Containers
Drums
IBCs/Totes
Data & Info

Storage Container Information:

Oil-Filled Equipment – Oil Cooled, Hydraulic Powered, Oil Fired, etc.
Storage Container Information:

Oil-Filled Electrical Equipment – Transformers, Capacitors, Circuit Breakers, Switches
Storage Container Information:

Less Common Oil Filled Equipment – Compactors, Balers, Elevators/Lifts, Fire Suppression Pump Fuel Tank, etc.
Storage Container Information:

Consider Listing by Category (Requirements Vary)
ASTs, USTs, Mobile Containers, Oil-Filled Equipment, Oil-Filled Electrical Equipment
Data & Info

Storage Container Information:

Necessary Info – Location (on Facility Diagram), Contents, Shell Capacity, Identify Secondary Containment, Discharge Volumes/Rate and Flow Direction
Data & Info

Storage Container Information:

Additional Info – Material of Construction; Various Failure/Release Modes, Rates, and Volumes; Container Cross-Section (Tanks); Orientation;
Storage Container Information:

Additional Info – Dimensions; Fail-Safe Engineering; Transfer Methods (In and Out); Formal Inspection Status (last date); Coordinates (Plant, Geographic, State Plane, UTM...
Data & Info

Storage Container Information:

Value of Additional Info
Assist Facility Preventive Maintenance
   Scheduling and Tracking
Assist with Identifying Replacement Storage
Assist with Specifications for
   Additional Storage
Data & Info

Storage Container Information:
Value of Additional Info
Various Failure Modes with Rates Could Help in Release Response
Coordinates May be Beneficial in Catastrophic Situations
Data & Info

Storage Container Information – Data Collection:

Formalize an Asset Information Sheet (Tanks) Complete for Existing Tanks & Additions
Inspections & Records:
Baseline Likely Derived from Steel Tank Institute and/or American Petroleum Institute standards/guides
Inspections & Records:

Work with PE to Find Procedures that are Compliant, Implementable, and have Added Value for Your Facility. Get Input from Personnel Conducting Inspections.
Inspections & Records:
Be Sure to Include Spill Response Equipment and Supplies.
Training:
Work with PE to Tailor Training to Facility’s Existing Training Practices. Make Sure Training Addresses Level of Response of which Employees are Capable. Focus on Recognition and Notification for All Personnel.
Transfers:

Work with PE to Develop SOP for Transfers (or to modify existing to comply with SPCC requirements). Be Sure to Include Notifications, Training, and Procedures to be Followed by Non-Plant Personnel (e.g., outside delivery drivers)
Transfers:
Ensure that Transfers are Fully Attended by at Least the Driver (recommend plant representative & driver)
Notifications:
If Feasible, Empower All Facility Personnel to Understand and Take Appropriate Action in Response To Release (including notification)
Data & Info

Notifications:

Make sure Notification List is Maintained Up To Date
Be Certain that All Parties to be Notified are Included
Data & Info

Notifications:

Examples - Facility Management, Facility EHS, Facility Security, Facility Emergency Medical, National Response Center (NRC), Local Emergency
Notifications:

Planning Committee (LEPC); Kentucky Emergency Response Team (KERT); Kentucky Emergency Response Commission (KERC); Local Police/Fire/EMTs, etc.
Notifications:

Great Idea from Recent Client – Post Response / Notification Procedure with Spill Kits Located at Strategic Positions Throughout Facility
Containment

Calculations for Sized Containment:

Complete Necessary Measurements and Calculations to Demonstrate Compliance with Secondary Containment Requirements – not required for SPCC Plan, but Valuable in Event of Spill or Inspection
Consider Possibilities for Integration of Multiple Environmental Plans into One (Including SPCC)

Obvious Advantages but Represents Challenges
Integration

Potential Candidates for Integration with SPCC?
Groundwater Protection Plan
Stormwater Best Management Practices or Pollution
Prevention Plan
RCRA Generator Inspections/Contingency Plans
Integration

Challenges:
Differing Schedules for Review/Revision
Different Notification/Reporting Requirements
Different Agencies Controlling Different Plans
In Some Cases Different Regulated Materials and Media
Integration

Models / Information

USEPA Integrated Contingency Plan ("One Plan")
QUESTIONS

Thank You!