Goal Of Presentation

Explain EAE’s Capability and Experience in Assisting with EPA SPCC Requirements and the Resulting Impacts, Challenges, and Risks for Above Ground Bulk Oil Storage Facilities
Outline

- History of SPCC (Spill Prevention Control and Countermeasure)
- Facilities Requiring SPCC Plans
- General SPCC Requirements
- SPCC Plan Required Elements
- SPCC Challenging Situations
- EAE SPCC Capability and Experience
Passed in 1972, the Clean Water Act was a response to the nearly unchecked dumping of pollution into our waterways. At the time, two-thirds of the country's lakes, rivers and coastal waters had become unsafe for fishing or swimming. The goal of the Clean Water Act was to reduce pollution in all U.S. waters to "restore and maintain the chemical, physical, and biological integrity of our nation's waters."
Original SPCC Prevention Regulation

- Promulgated on December 10, 1973
- Effective on January 10, 1974
- Largely unchanged for 28 years
- Authority: Clean Water Act (CWA) 311(j)(1)(C) and 501, and codified under 40 CFR part 112
Purpose of SPCC Rule 40 CFR 112

- To prevent oil discharges from reaching navigable waters of the U.S. or adjoining shorelines by requiring site specific plans.
- To ensure that effective/proactive measures are implemented to prevent or in response to an oil discharge.
2002 SPCC Rule

- Publication Date: July 17, 2002
- Effective Date: August 16, 2002
- December 5, 2008 Amendments effective January 14, 2010
- Published November 20, 2008 Final Extension Dates for all facilities November 10, 2010
Why Ruling was Amended

- In January 1988, a four-million gallon aboveground storage tank in PA, experienced a brittle fracture of the tank shell, which then released approximately 3.8 million gallons of diesel fuel.
- An SPCC Task force was formed to examine AST federal regulations.
Elements of New Rule

- Clarification that the new rule is mandatory (should to must).
- Raises the threshold by eliminating the 660 gallon/single container criterion. Now total >1,320 gallons.
- Exempts containers less than 55 gallons from capacity calculation.
Sites Requiring SPCC Plans

- The aggregate aboveground storage capacity of the facility is 1,320 gallons or greater of oil.
- Only containers with a capacity of 55 gallons or greater are counted.
- The aggregate aboveground storage capacity of a facility excludes the capacity of a container that is “permanently closed” if proper labeling is present.
Example Facilities
Facilities Requiring SPCC Plans

- Filling Stations
- Construction Contractor Sites
- Farms
- Manufacturing Plants
- Fuel Production Fields
- Quarries
- Marinas
- Facilities with Back-Up Generator Tanks
- Many Others
General SPCC Requirements

• The management acknowledges its responsibility to its neighbors, employees, and the community to take all reasonable steps necessary to prevent spills to protect human health and the environment.

• The owner shall see that its agents and employees are properly informed of the SPCC Plan and know their role in maintaining the SPCC Plan or in minimizing a spill.
General SPCC Requirements cont.

- The SPCC Plan must be maintained on site for any facility manned a minimum of 4 hours daily.
- The SPCC Plan must be updated a minimum of once every 5 years or when there is a change in the facility design, construction, operation, or maintenance affecting its potential for discharge.
- SPCC Plans must be sealed by a Professional Engineer unless the facility meets the qualified facility qualification criteria.
Qualified Facility Requirements

- 10,000 US gallons or less aggregate above ground oil storage capacity

- Within any 12 month period in the last 3 years:
  - No single discharge of oil greater than 1,000 gallons
  - No two discharges of oil each exceeding 42 gallons
SPCC Plan Elements

- Facility address and location within state
- Site and area topography
- Direction from which traffic enters facility
- Type of facility and operations
- Number of dispensers and dispenser islands
The facility diagram must mark the location and contents of each oil container and the contents of each container and secondary containment provided.
AST Piping

- Aboveground valve and piping shall be inspected on a regular basis and shall be marked with the product content, origin, and direction of flow.
- All aboveground piping is and shall remain protected from vehicular traffic.
Loading and Unloading

• Minimize fire hazards – no smoking or fire, engine stopped (unless required for pump).
• Handbrake set and cargo truck attended at all times within 25 feet.
• Facility manager confirms types and amounts of fuel delivered to each tank.
• Signage or equivalent method to prevent vehicles from departing prior to disconnecting transfer lines and to check for leaks.
Secondary Containment

- Secondary containment is designed to contain the volume of the largest tanks plus additional volume for precipitation.
- Overfill protection is required on all tanks receiving fuel deliveries.
Secondary Containment *cont.*

- The entire containment system must be capable of containing oil and constructed so that a discharge will not escape the containment system before cleanup occurs.
- No vegetation shall be allowed to grow or debris accumulated in the containment area.
Secondary Containment \textit{cont.}

- Sized secondary containment must be provided (sufficient to contain a release from the single largest compartment of the cargo tank vehicle) for any loading racks.
If a spill occurs...

- Spill Response Procedures must be posted.
- The facility personnel are and shall continue to be trained to respond to spills of less than 100 gallons at the facility.
- Employees should identify source, type, and approximate amount of spill.
- Evaluate the possibility of fire hazard to inform the Fire Department accordingly.
Inspections

- Employees need to periodically observe the Aboveground Storage tanks, valves, aboveground piping and dispensers for potential problems and document inspection results according to accepted industry procedures. If a problem is observed the employee shall inform the facility manager, who will in turn take necessary action.
Specified security measures must be in place or are to be implemented to minimize the opportunity for vandalism.
SPCC Challenging Situations
Loading Racks

- Stand – alone dual walled AST
- Loading Rack utilized for USTs only
- Is the loading rack subject to SPCC regulations?
New Loading Rack Clarification

- December 2008 Rule Clarification
- 40 CFR 112.7 (h)
- Since transfers from loading racks are a potential source of discharge and additionally because a loading rack is not typically subject to UST regulations 40 CFR 280 and 281, EPA believes loading racks should be regulated under the SPCC regulations at an otherwise regulated SPCC facility.
Best Drum Secondary Containment

- Concrete Floor Storage Warehouse
- Multiple areas of oil drum storage
- For business reasons drums moved often with forklifts
- Optimum method of secondary containment?
Impervious Floor?

- Concrete retaining walls
- Gravel over packed dirt containment floor
- Drainage records kept to show that containment area holds spills
- Is floor sufficiently impervious?
Impermeability Determination

- 40 CFR 112.8 (c)(2) states “You must ensure that diked areas are sufficiently impervious to contain discharged oil until cleanup can occur.”

- This is an engineer decision based upon
  - Type and viscosity of oil contained
  - Frequency of containment area inspection and likelihood that a release will be discovered quickly
  - Soil type and presence of drainage records
EAE Capability and Experience

- EAE in Partnership with Williams & Company
  - Developed SPCC Plan shells and site visit checklists.
  - Completed over 150 SPCC Plans in 16 states to date.
  - Provide consulting services to facilities before, during, and after EPA inspections.
  - Aid clients in requesting and obtaining KS state funds for HB2756 that reimburses facilities with retail fuel sales for SPCC expenses.
EAE has Experience in a Wide Range of SPCC Facility Types

- Filling/Service Stations
- Bulk fuel plants
- Manufacturing Facilities
- Commercial Fleet Vehicle Maintenance Facilities
- Biodiesel Fuel Plant
- Marinas
- Quarries
- Construction Contractors
- Facilities with Back-Up Generator Tanks
EAE Unique Staff Qualifications

- EAE is a woman owned business certified in Kansas, Missouri, and Nebraska.
- 7 Professionals trained to visit facilities, draft SPCC Plans and make cost effective recommendations.
- 3 engineers – 2 of which are P.E. licensed.
- EAE Staff member, Gale Wright, is a former EPA Branch Chief with wide range of regulatory experience.
- Engineering Staff maintain close ties with EPA SPCC contacts and track changes to SPCC Regulations and Policy.
- Partner Firm, Williams & Company, Inc., has in depth knowledge in AST and UST tank systems
- Dedicated Administrative SPCC Specialist support.
Unique SPCC Capabilities

- We guarantee to cover any EPA imposed fines attributed to the SPCC Plan.
- We offer EPA required SPCC training.
- We provide all forms for tank, piping, and containment inspection, training, revisions, and drainage records.
- We provide a dedicated storage system for electronic files to simplify future revisions.
- We offer the unique option to modify the facility prior to SPCC Plan publishing to limit exceptions.
Additional Resources

- Partnership with regional certified tank inspection firm
- Structural Engineer employee of EAE available to aid in facility design
- Capability to address state and/or local petroleum/oil storage requirements if requested
- Capability to create SWPPP Plans if requested
- Website for additional Information
  www.spccplan.com