

Spill Prevention, Control and Countermeasure (SPCC) Plan Revisions Evaluation for E&P Operations

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Where are we now?

- Original SPCC Plan Rules published in 1973
- Revisions proposals examined in 1991, 1993, and 1997
- New Rules Revision Promulgated on July 17, 2002

Where are we now?

- API, Marathon and Petroleum Marketers Association of America (PMAA) sued EPA
- 29 March 2004 All litigants settled out of court regarding
 - ✓ Loading rack definition –E&P truck loading facilities are not loading racks

Where are we now?

Resolved

- ✓ Definition of “Practicable” – requires ring levee at drilling sites and pressure testing of flowlines
- ✓ Produced Water – produced water from dry gas well are exempted SPCC Plan inclusion. Produced water from liquid hydrocarbon producing are consider oil.
- ✓ Definition of facility – the definition contained in 112.2 at 69 FR 47142 applies

Where are we now ?

Resolved

- ✓ All previously submitted requests for extension are invalidated
- ✓ A new request for extension must be submitted
- ✓ The 1973, as amended, SPCC Plan must be maintained until revised Plan implemented

Facility

- All mobile or fixed installation, equipment, pipe or pipeline used during oil & gas drilling, producing, storing, gathering, processing, or transferring
- Includes: Drilling rig storage, tank batteries, flowlines, gathering lines, separators, heater treaters, heaters, produced water tanks, compressors, etc. each container having a volume of ≥ 55 gal..

Where are we now?

Resolved

- ✓ Oil container integrity testing – visual inspection is acceptable for shop-made containers <714 bbl, where a) the container is placed on an impervious surface so leakage can drain from under the container or b) all container surfaces can be visually inspected, e.g., container on a stand or legs. Other hydrocarbon container be non-destructively inspected, e.g., pressure tested or ultrasonically inspected –only applies to E&P containers, which cannot be diked
- ✓ Security – Does not apply to E&P containers

Where are we now?

Unresolved

- ✓ Definition of Navigable Waters – in litigation. 5th Circuit dictum exempts borrow ditches and intermittent streams not adjacent to in-fact navigable streams are not Navigable Waters within Texas, Louisiana and Mississippi.
- ✓ Compliance date extension – EPA is evaluating
- ✓ Definition of a “small facility” – EPA is considering the definition
- ✓ Definition of diked area “capable of containing oil” – this issue has been lost in the system

Where are we now?

Unresolved

- Reserve Pits
 - ✓ Drilling contractor include the reserve pit as a spill container in their SPCC Plans, but do not take responsibility for the pit
 - ✓ IADC states the reserve pit is the operator's responsibility
 - ✓ We believe reserve pits should be included as part of the Drilling Contractor responsibility, because the Contractor directs all releases to the pit.
 - ✓ It is not logical for the Contractor to have a release and then impose the responsibility on the operator

Original Rule Concept

- Useful compromise worked out between API and EPA in 1973
 - ✓ Compromise allowed discretion (e.g. “should” instead of “shall”)
 - ✓ Professional Engineer (P.E.) assigned the discretion of determining plan adequacy.

New Rule Concepts

- More rigid controls – P.E. discretion eliminated
- P.E. attests plan conforms to SPCC Rules
- P.E. accepts greater liability for plan failure
- Field gathering line inspection and maintenance plan
- Many, many more.....

Rule Applicability

- Non-transportation related onshore and offshore (State waters) facilities
- Facility location reasonably expected to release oil causing a sheen on Navigable Waters.
- Applies to producers, sellers, storers, refiners or users having hydrocarbon containers ≥ 55 gal capacity totaling > 1320 gal

Exceptions :

- Underground tanks \leq 42,000 gallons covered by 40 CFR 280 or 281
- Above ground storage capacity \leq 1320 gallons
- Containers $<$ 55 gallons
- Drilling, well servicing and production facilities covered by DOT rules
 - ✓ *Examples: moving from location to location or regulated common carrier pipelines*
- OCS facilities under MMS control
- Permanently closed containers & pressure vessels
- Dry gas facilities (no condensate)

Major Rule Changes

- Different types of oil handling facilities detailed in regulations, e.g., farmers
- Exempts buried tanks $\leq 42,000$ gallons
- Eliminates 660 gallon threshold; Uses new 1320 gallon threshold
- Exempts wastewater treatment containers, but not produced water containers

Major Rule Changes

- New release reporting requirements
- New Professional Engineer requirements
- New compliance/implementation dates –17
February 2006/18 August 2006
- Include 55gal containers

New Key Applicability Definition:

- Any portable or fixed onshore /offshore building, structure, installation, pipe or pipeline (other than a vessel or a public vessel) used in oil drilling, producing, refining, storing, gathering, processing, transferring, distributing and waste treatment not under regulatory control of DOT, or DOI .

When do the plans have to be prepared?

- Existing fixed & mobile facilities must prepare plans by 17 February 2006 and implement by 18 August 2006. In the mean time, the 1973 rule, as amended, apply, if operator continues to comply (69 FR 48794)
- New facilities, must prepare & implement Plans by 18 August 2006
- Facilities becoming operational after 18 August 2006 must implement plans before start-up

What are the Professional Engineer's Responsibilities?

- Attests to:
 - ✓ being familiar with SPCC rule requirements
 - ✓ having he/she or agent visited the facility
 - ✓ plan prepared in accordance with good engineering practice and applicable industry standards
 - ✓ having established procedures for required inspections
 - ✓ plan is adequate & appropriate for the facility

What are the Facility Owner's Responsibilities

- Maintain a plan copy on site, if manned four or more hours/day
- Have plan available for regional administrator to review
- Attest to the Plan review at a minimum of once every 5 years and the need to amend or not amend the Plan

Can the Plan Preparation Time be Extended ?

The Regional Administrator may Extend the plan preparation time, **only**, if he/she finds the owner/operator cannot prepare the plan in a timely manner because of:

- ✓ Lack of qualified P.E.
- ✓ Delays in Construction
- ✓ Equipment Delays

If not caused by owner/operator

Reporting Requirements

- If the facility has a discharge of >1000 gallons in a single incident or >42 gallons in each of two discharges within a rolling 12 month period the operator must:
 - ✓ report the release to EPA & the Nation Response Center
 - ✓ forward the EPA report to State Agencies – do not send Plan
 - ✓ follow Regional Administrator's (RA) instructions to amend the plan
 - ✓ amend your plan
 - ✓ have right to appeal RA Instructions within 30 days

Information Required by the RA, if you have a Reportable Release

- Name of facility
- Name of operator representative
- Facility Location
- Maximum storage capacity and daily throughput
- Corrective actions and countermeasures taken
- Description of facility, maps, flow diagrams etc.
- Cause of oil release
- Additional preventive measures taken

When must a Plan be Amended?

- Within 6 months of changes in :
 - ✓ Facility design
 - ✓ Construction, operation, or maintenance affecting potential to release oil
 - ✓ Construction or removal of secondary containment
- Implement within 6 months of revised Plan preparation

What about Review and Evaluation of the Plan?

- Plan must be reviewed and evaluated every 5 years
- New technology or improved measures trigger review
- New measures must be in place 6 months after the review completed
- Review must be dated & attested to by owner/operator

Rule Overall Structure

- General requirements apply to all onshore & offshore facilities
- Specific requirements are added to the general requirements for producing, drilling & workover operations individually for onshore and offshore

General Requirements

- Discuss how the Plan conforms to the rule
- If Plan deviates from the rule, how does your proposal provide equivalence
- Describe the facility layout
- Provide a flow diagram of facility showing piping, containers, pumps and piping
- List
 - ✓ type of hydrocarbon in each container
 - ✓ release prevention procedures available when transferring oil, loading & unloading
 - ✓ Release and drainage controls
 - ✓ Countermeasures for discovery, response & cleanup

General Requirements

- List methods of recovered material disposal
- Contact list & phone numbers
 - ✓ facility response coordinator
 - ✓ National Response Center
 - ✓ cleanup contractors having a written agreement with the operator
- Release-reporting procedures, either from Response Plan or developed for SPCC Plan
- Describe control measures & available support materials

General Requirements

- If experience dictates a potential for releases,
 - ✓ predict the direction of release flow
 - ✓ rate of flow
 - ✓ quantity of flow
- Provide containment or diversionary structures to prevent hydrocarbon from entering navigable waters
- Onshore
 - ✓ berms, dikes, retaining walls
 - ✓ Curbing
 - ✓ culverting, gutters or other drainage systems
 - ✓ Weirs, booms & barriers
 - ✓ Spill diversion ponds

General Requirements

- ✓ retention ponds
- ✓ sorbent materials
- Offshore
 - ✓ curbing & drip pans
 - ✓ sumps & collection systems
- Onshore/Offshore Impracticable provisions
 - ✓ provide equivalent protection
 - ✓ explain why rule is not practicable & how the protection is equivalent
 - ✓ If no Response Plan available
 - For containers, provide a periodic integrity testing

General Requirements

- For piping & valves, periodic integrity & leak testing
- ✓ contingency plan
- ✓ written management commitment to provide manpower, equipment & materials
- Prepare written procedure for required inspection & tests
- ✓ keep procedures with the Plan, & for three years, records of inspections & tests signed by the supervisor
- Train your (contract?) oil-handling personnel in operation & maintenance of equipment

General Requirements

- ✓ designate a person who is accountable for oil release prevention
- ✓ at least once per year, conduct release prevention briefing for oil-handling personnel
- Field-constructed tanks typically refer to field-welded tanks >1000 bbl capacity- if such tanks exist & are ≥ 1 in thick brittle fracture can exist
- ✓ if such tanks undergoes repair, alteration, reconstruction, or change of service, evaluate the container for risk of discharge & correct observed problem
- Include in the Plan all state and local oil spill requirements

Plan Formatting

- The format for Plan General Requirements must follow the prescribed (above) sequence
 - ✓ Existing Plan may be update, but the General Requirements section must be cross-indexed to follow the above sequence

Onshore Production Facilities Requirements

- Meet General Requirements
- Keep dike drains closed & sealed (locked), except when in use
 - ✓ inspect diked water before draining
 - ✓ drain only uncontaminated rain water from diked areas
 - ✓ Do not drain to a navigable waters
- Schedule inspection of field drainage ditches
 - ✓ Remove accumulated oil
- Select tank materials compatible with the stored oil
 - ✓ dike or drip pan all containers ≥ 55 gals, separators, transfer pumps, heaters & heater treaters having a capacity of the largest container in the dike/pan + precipitation
- Schedule regular container & foundation inspections

Onshore Production Facilities

- Design/update tank batteries in accordance with good engineering practice
 - ✓ adequate size tank, or
 - ✓ Equalizer lines between tanks, or
 - ✓ Tank vacuum protection, or
 - ✓ High level sensor for computer controlled
- Regularly scheduled inspection of piping & valves associated with oil transfers. Repair as required
- Periodically inspect produced water treating facilities
- Provide a flowline maintenance program

Onshore Drilling & Workover

- Meet General Requirements
- Position equipment to prevent releases to navigable waters
- Provide ring level, catchment basin or diversionary structure to intercept releases
- Install BOPE when drilling casing or working-over a well
 - ✓ BOPE must be rated to control well

Offshore Oil Drilling, Producing or Workover Facilities

- Meet General Requirements
- Use collection system (curbing, drain pans, sumps etc.) to collect small discharges and leaks. Oil must be drained to a sump or removed
- Sumps must be sized adequately and have a standby pump.
- Schedule inspection, testing & preventative maintenance of sump and sump pumps.
- Equip atmospheric tanks & surge vessels with high liquid level shut-down valves or alarms
- Provide high /low pressure shut-down valves or alarms on pressure vessels. Provide corrosion protection on containers, as needed
- Prepare & maintain at the facility a written plan for inspecting and testing pollution equipment and systems
 - ✓ Schedule periodic inspections of pollution equipment
 - ✓ Conduct simulated (table top) discharges to test pollution control & countermeasure systems
- Operating instructions/records of surface and subsurface shut down valves and activation

Offshore Oil Drilling, Producing or Workover Facilities

- Install BOPE on wells, if drilling below casing shoe
 - ✓ BOPE must be rated to control well
- Install check valves at well headers on each flowline
- If well surface press exceeds flowline working pressure, install flowline high pressure sensors and shut-down valves
- Provide corrosion protection on piping leading to and from facility
- Maintain sub-marine piping in good condition
 - ✓ routinely according to a schedule inspect or test sub-marine piping
 - ✓ Document & keep inspection records with the Plan

Conclusions

- We expect no more extensions of the SPCC Plan implementation (17 February 2006) & compliance dates (18 August 2006)
- Existing Plans must be re-written, because cost of formatting requirements & including new provisions

Conclusions

- Maintain all provisions of existing Plan – this will provide continuing compliance
- Anticipate an additional two-year extension for small facilities, as yet undefined. (69 FR 38297)

Recommendations

- The SPCC Plan rule is in flux:
 - ✓ Maintain existing SPCC Plans in accordance with the 1973 rule
 - ✓ New facility SPCC Plan – prepare SPCC based on the suggested template provided
 - ✓ Recognize the template has not been sanctioned by EPA, but appears to contain the required minimum plan elements.