

Preparation of SPCC Plans - A Practical Course for Tank Owners and Engineering Firms

An Online Continuing Education Course for Engineers

Course Number: EN-8001

Credit: 8 Hours / 8 PDH / 8 CPD

Preparation of SPCC Plans

A Practical Course for Tank Owners and Engineering Firms

Abstract

Federal Law, 40 CFR 112 requires that all owners of aboveground storage tanks in oil service must prepare and implement a Spill Prevention, Containment and Countermeasures (SPCC) plan by November 10 1, 2011. Under many common circumstances, SPCC plans must be prepared under the supervision of a registered professional engineer. Course authors Joey Barnes, PE and John G. Dzwonczyk, PE, CFPS have prepared over 200 SPCC plans themselves, and have developed a simple model for producing them using an online system that captures site specific data and formats it into a user-friendly, compliant product. This course gives a thorough treatment of the requirements of SPCC plans, provides resource material and instructions on how owners and engineers can use the online system to simplify plan preparation while meeting the complex requirements established by the EPA's rules. Additionally, registered engineers can receive (8) Professional Development Hours after passing an online exam covering the coursework.

Course Outline

- 1) Background
 - A. Summary
 - B. Enabling Legislation And Brief History
 - C. Purpose And Public Benefits
 - D. Assessing The Regulated Community
 - E. Involvement Of Professional Engineers
 - F. Insurance Implications

- 2) Requirements
 - A. Capacity Thresholds
 - B. Adequate Secondary Containment
 - C. Facility Drainage
 - D. Transfer Operations
 - E. Security

- 3) Field Survey
 - A. Facility Information
 - B. Tank Inspection
 - C. Secondary Containment Inspection
 - D. Assess Drainage Pathways
 - E. Site Diagram

- 4) Written Plan
 - A. Form of Plan

- B. Required Declarations
- C. Optional Declarations

- 5) Using Online Facilities for Plan Preparation
 - A. Registering with RCI-Safety.com
 - 1. Creating an Account
 - 2. Paying for online services
 - B. Data Entry
 - 1. Creating a file
 - 2. Entering site data
 - 3. Uploading documents
 - 4. Saving a file
 - 5. Print Previews
 - 6. Downloading a file
 - C. Client Management
 - 1. Updating files
 - 2. Reminder services
 - 3. Voluntary submittal to government databases
- 6) Execution of the plan with owners
- 7) Recordkeeping
 - A. Discharge Reports
 - B. Inspection Reports
 - C. Drainage Events
 - D. Training Logs
- 8) Enforcement by EPA
 - A. Likely enforcement targets
 - B. Enforcement Budgets
 - C. Enforcement Schedules
- 9) Business aspects of SPCC plan preparation for engineering firms
 - A. Risk assessment
 - B. Price estimating
 - C. Payment schedule
 - D. Marketing Ideas
- 10) Comprehensive Examination
 - A. 40 multiple choice questions

Full Course

- 1) Background
 - A. Summary

What is the SPCC rule and what is a SPCC Plan?

The original SPCC final rule was published in Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) in 1973. The SPCC rule is designed to protect public health, public welfare, and the environment from potential harmful effects of oil discharges to navigable waters and adjoining shorelines. The rule requires facilities that could reasonably be expected to discharge oil in quantities that may be harmful into navigable waters of the United States and adjoining shorelines to develop and implement SPCC Plans. The Plans ensure that these facilities put in place containment and countermeasures that will prevent oil discharges. The requirement to develop, implement, and revise the SPCC Plan, as well as train employees to carry it out, will allow owners and operators to achieve the goal of preventing, preparing for, and responding to oil discharges that threaten navigable waters and adjoining shorelines.

General Applicability

Section 112.1 establishes the general applicability of the SPCC rule by describing the facilities, activities, and equipment that are subject to the rule and those that are excluded. In general, SPCC-regulated facilities are non-transportation related, have aboveground oil storage capacity of more than 1,320 gallons on site, and could reasonably be expected to discharge oil to navigable waters or adjoining shorelines in quantities that may be harmful. Facilities owned and operated by federal government agencies are subject to the regulation to the same extent as any other facility (although the federal government is not subject to civil penalties). Likewise, facilities owned and operated by state and local governments are subject to the regulation. Section 112.1(d) describes the facilities, activities, and equipment excluded from the rule based on jurisdiction or through exemptions or exclusions from storage capacity calculations. Exemptions pertain to whether a facility or part thereof is included in the SPCC-regulated universe, and exclusions from storage capacity determine which containers count when determining a facility's total oil storage capacity. In addition to facilities that are excluded from the SPCC rule because they are not subject to EPA's jurisdiction, §112.1(d) exempts:

- Any facility where the storage capacity of completely buried storage tanks and associated piping and equipment does not exceed 42,000 gallons and the aggregate aboveground storage capacity does not exceed 1,320 gallons;
- Any container with a storage capacity less than 55 gallons at a facility, whether or not subject to the requirements of the SPCC rule; and
- Any facility or part thereof used exclusively for wastewater treatment.

Exclusions from storage capacity calculations include:

- Containers with a storage capacity of less than 55 gallons;
- Storage containers used exclusively in wastewater treatment;
- Completely buried tanks and associated piping and equipment that are subject to all of the technical requirements under 40 CFR part 280 or 281; and
- The capacity of any “permanently closed” aboveground storage container.

Notwithstanding the exemptions and exclusions provided in §112.1(d), under §112.1(f) the Regional Administrator has discretion to require the owner or operator of any facility, subject to EPA’s jurisdiction under §311(j) Clean Water Act (CWA), to submit an SPCC Plan, or part of an SPCC Plan, in order to carry out the purposes of the CWA.

What is “oil”?

The SPCC rule’s definition of oil originated from the Clean Water Act (CWA). Section 311(a)(1) of the CWA defines oil as “oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.” Petroleum oils include crude and refined petroleum products, asphalt, gasoline, fuel oils, mineral oils, naphtha, sludge, oil refuse, and oil mixed with wastes other than dredged spoil (67 FR 47075).

The U.S. Coast Guard (USCG) compiled a list of substances it considers oil, based on the CWA definition. The list is available on the USCG Web site. Note, however, that the USCG list is not comprehensive and does not define “oil” for purposes of 40 CFR part 112. EPA may determine that a substance, chemical, material, or mixture is an oil even if it is not on the USCG list.

Oil covered under the SPCC regulation is further described in 40 CFR 112.2 as including “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, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.” Oil includes animal fats and vegetable oils.

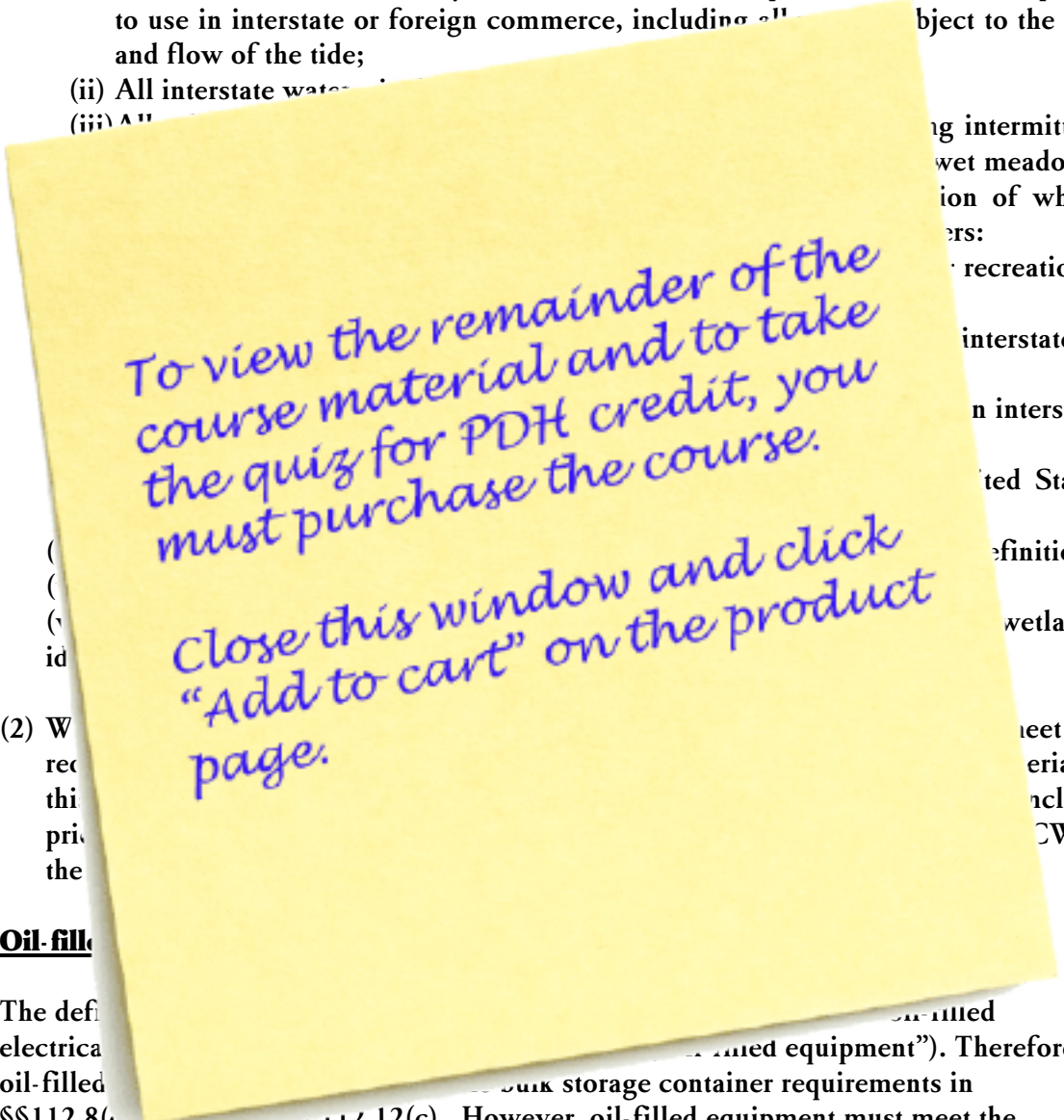
The SPCC rule applies to synthetic oils. Synthetic oils are used in a wide range of applications, including as heat transfer fluids, engine fluids, hydraulic and transmission fluids, metalworking fluids, dielectric fluids, compressor lubricants, and turbine lubricants. Synthetic oils are created by chemical synthesis rather than by refining petroleum crude or extracting from plant seeds. The base materials from which synthetic oils are synthesized include glycols, esters, polyalphaolefins, aromatics, silicone fluids, Group III base oils, and others. Because of their origin, synthetic oils are generally covered under subpart B of 40 CFR 112, which covers “petroleum oils and *non-petroleum oils...*” Certain oils are synthesized from plant material, and thus may be considered with animal fats and vegetable oils under subpart C of 40 CFR part 112, which applies to “animal fats and oils and greases, and fish and marine mammal oils; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.”

What is a “navigable water”?

Section 112.2 provides the SPCC rule’s definition of “navigable waters.”
Navigable water means the waters of the United States, including the territorial seas.

(1) The term includes:

- (i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- (ii) All interstate waters;
- (iii) All waters connecting intermittent wet meadows, swamps, or wetlands, the portion of which are subject to the ebb and flow of the tide;



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Oil-fill

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§§112.8(c)
general requirements of §112.7.

Oil-filled Operational Equipment

Oil-filled operational equipment includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device.