

Environment and Safety:
Storm Water Runoff and Oil Pollution

Oil Pollution Prevention

40 CFR 112 – Oil Pollution Prevention

- U.S. EPA (Federal Plan)
- Purpose
 - To prevent oil discharge from reaching navigable waters of the U.S. or adjoining shorelines,
 - To ensure effective response to the discharge of oil, and;
 - To ensure that “proactive” measures are used in response to an oil discharge

Spill Prevention Control & Countermeasure (SPCC) Plan

Oil Pollution Prevention

Applicability

- Non-transportation related facility
 - A facility that stores, processes, refines, uses or consumes oil may be subject to these rules
 - Operations that move oil from one facility to another i.e., transportation related, are not included
 - Pipeline systems, highway or rail oil transport, etc.
- Due to **location** could reasonably be expected to discharge **oil in quantities** that may be harmful into **navigable waters** of the U.S.

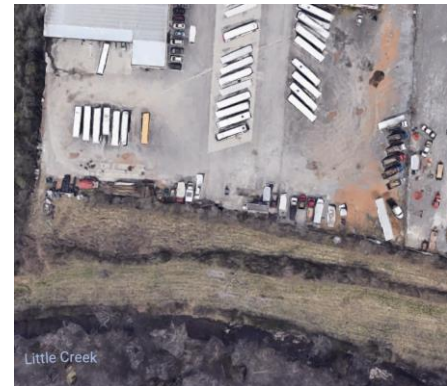
The rule does not define “reasonably be expected”

Oil Pollution Prevention

Location & Reasonable Expectation of Discharge

- Consider the geography and location of your facility relative to nearby waters (streams, creeks, lakes, wetlands and other waterways).
- Consider if ditches, gullies, or drainage systems might transport an oil spill to nearby waters.

How about sanitary or storm water drainage systems that lead to a publicly owned treatment works (POTW)?



Oil Pollution Prevention

What is oil?

- Oil of any type and any form, including but not limited to:
 - Petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oils mixed with waste other than drudge
 - Fats, oils or greases of animals, fish or marine mammal origin
 - Vegetable oils, including seeds, nuts, fruits or kernels



Oil Pollution Prevention

What chemicals do we use? Oil/Petroleum based?



Gasoline & Diesel?



New & Used Oil?



Diesel Exhaust Fluid?



Automatic Transmission Fluid?



Windshield Washer Fluid?

Oil Pollution Prevention

Oil in Quantity

- Facilities that meet the following criteria:
 - An aggregate aboveground oil storage capacity greater than 1,320 gallons, or;
 - An aggregate completely buried oil storage capacity greater than 42,000 gallons.
- What is oil storage capacity?
 - All containers greater than or equal to 55 gallons
 - Capacity of the container (maximum shell capacity) not just actual amount in container

Oil Pollution Prevention

Storage considerations

- What about tanks no longer in use?
 - Permanently closed – empty, marked, disconnected
- Bunkered/partially buried tanks and vaults?
 - Tanks on or above the floor of underground areas?
 - Considered aboveground storage: *40 CFR 112.1(b)(4)*
- Mobile refuelers and tank trucks?
 - Regulated if they operate exclusively in the confines of non-transportation related facility

Example: a tank truck moves within the confines of the facility and only leaves the facility to obtain more fuel (oil) or the tank truck is refueled onsite



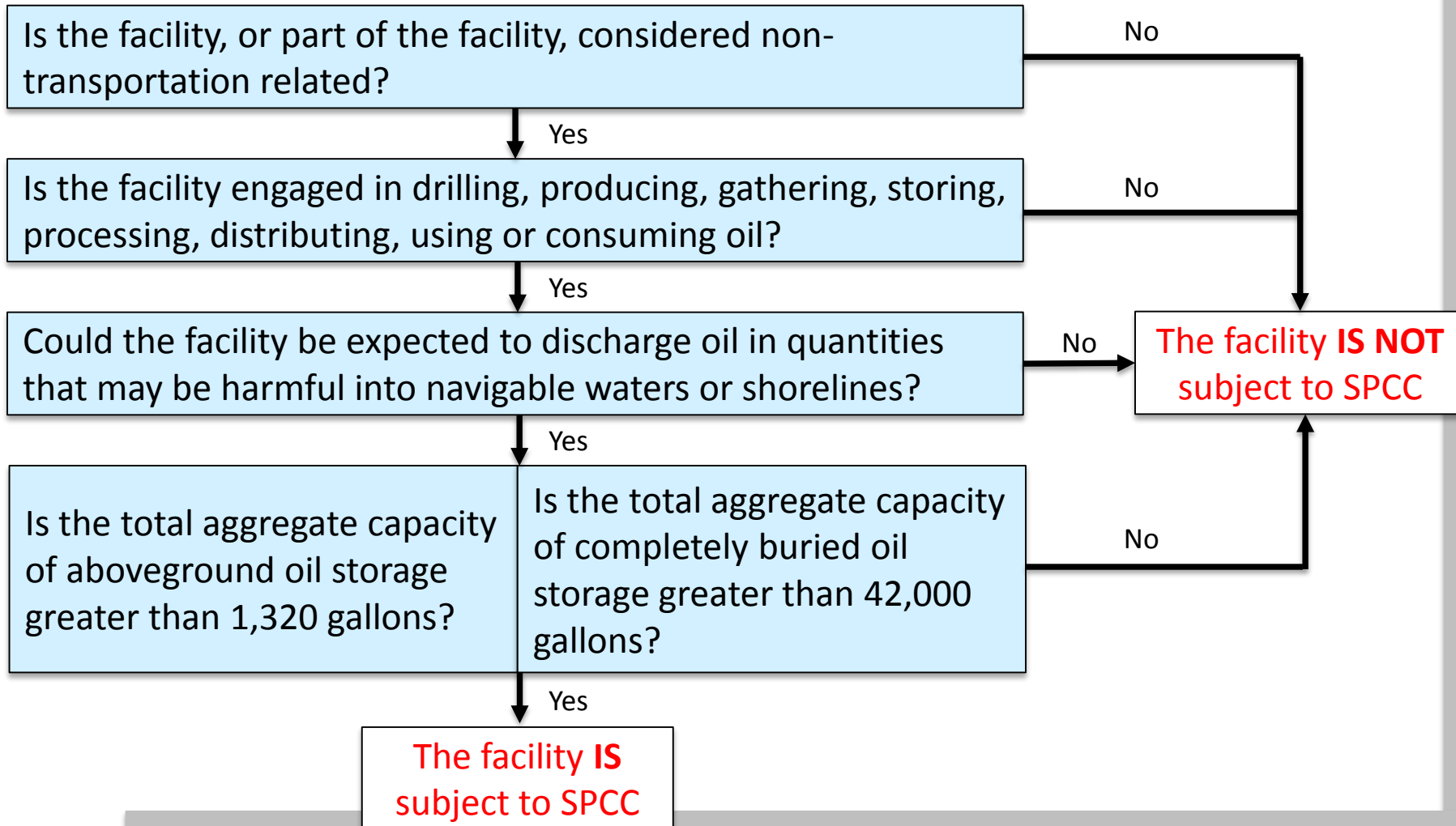
Oil Pollution Prevention

Storage Capacity Threshold

- Once a facility is subject to the rule, all aboveground and completely buried tanks are subject to the requirements
- Example – facility has the following:
 - 10,000 gallons aggregate aboveground storage
 - 10,000 gallons aggregate completely buried storage
 - Because aboveground storage capacity exceeds threshold, all tanks are subject to SPCC rules

Oil Pollution Prevention

Summary of applicability flow chart



Spill Prevention Control & Countermeasures Plan

Who prepares the SPCC plan?

- Responsibility of facility owner/operator; a licensed Professional Engineer must review and certify
- A "qualified facility" can self-certify – Tier I or II

Qualified Facilities

If the facility total aboveground oil storage capacity is 10,000 gallons or less...

And within three years...	And...	Then the facility is...
<ul style="list-style-type: none">• No single discharge of oil exceeding 1,000 gallons, or• Two discharges of oil each exceeding 42 gallons within any 12 month period	No individual AST of oil greater than 5,000 gallons	Tier I Prepare a self-certified plan to all applicable rules or complete Plan template
	Any individual AST of oil greater than 5,000 gallons	Tier II Prepare a self-certified plan to all applicable rules

Spill Prevention Control & Countermeasures Plan

Qualified Tier I – SPCC Plan Template

- Appendix G of Part 112, or
- <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/tier-i-qualified-facility-spcc-plan-template>
- Some states have created templates for Qualified Tier II facilities as well.

If you are not required to have a SPCC plan there may still be spill plans required by your State

Spill Prevention Control & Countermeasures Plan

Key Elements of the SPCC Plan

- Facility layout/diagrams
- Types of oil & capacity
- Discharge prevention measures
- Discharge controls i.e., secondary containment
- Countermeasures for discharge
- Methods of disposal of recovered material
- Emergency contact lists
- Reporting, response & emergency procedures
- Containment systems
- Contingency plans
- Inspections
- Site security
- **Training (Annually)**
- **5 year – Plan review**

Spill Prevention Control & Countermeasures Plan

Oil Discharge Reporting Requirements

- “cause a film or sheen upon or discoloration of the surface water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or adjoining shoreline”
 - Discharges from a properly functioning engine do not need reported (accumulation in bilge not exempt)
- Consider NPDES permits as well as state and local reporting requirements
- National Response Center: 1-800-424-8802

Spill Prevention Control & Countermeasures Plan

Oil Discharge Reporting Requirements

- Discharge must be reported to EPA Regional Administrator when there is a discharge of...
 - More than 1,000 gallons of oil in a single discharge
 - More than 42 gallons of oil in each of two discharges within any 12 month period
 - Within 60 days
 - **Note:** gallon amount refers to the amount of oil which actually reaches waters, not the total amount spilled

Storm Water Pollution Prevention Plan

40 CFR Part 122 – National Pollutant Discharge Elimination System

What is storm water and what are its impacts?

- Water from rain or snow melt that does not immediately infiltrate into the ground and flows over/through natural or man-made storage or conveyance systems.
- Storm water runoff picks up industrial pollutants and typically discharges them directly into waterbodies or indirectly via storm sewer systems.

Storm Water Pollution Prevention Plan

EPA has identified six types of activities at industrial facilities that have the potential to be major sources of pollutants in storm water:

- Loading and Unloading Operations ←
- Outdoor Storage ←
- Outdoor Process Activities ←
- Dust or Particulate Generating Processes
- Illicit Connections and Non-Storm Water Discharges
- Waste Management ←

Storm Water Pollution Prevention Plan

Am I required to develop a SWPPP?

- Clean Water Act requires operators of “discharges associated with industrial activity” obtain a National Pollutant Discharge Elimination System Permit
 - Typically required to develop a SWPPP

What is an NPDES Permit?

- Under the NPDES program, all facilities which discharge **pollutants** from any **point source** into **waters of the United States** are required to obtain an NPDES permit

Storm Water Pollution Prevention Plan

Pollutants

- NPDES categorizes into three types:
 - Conventional
 - Toxic
 - Non-conventional

Potential Industrial Pollutants
Petroleum based fluids, battery acid,
waste, sludge, chemicals, etc.

Waters of the United States

- Navigable waters and Tributaries
- Interstate waters
- Intrastate lakes, rivers and streams

Storm Water Pollution Prevention Plan

Point Source

- It means any discernible, confined and discrete conveyance, such as pipe, ditch, channel, tunnel, conduit, container, etc.
- Typical point source discharges
 - Publicly owned treatment works (POTW)
 - Industrial facilities
 - Body of water

The need for a permit will depend on where you send your pollutants

Storm Water Pollution Prevention Plan

Individual Permits and General Permits

- Direct source – directly into water body
 - Individual NPDES Permit
- Indirect source – discharges to a POTW
 - Discharge into a municipal sanitary sewer system you do not need a permit by you should as about their permit requirements
 - Discharge into a municipal storm sewer system, you may need a permit depending on what you discharge. You should contact the NPDES permitting authority.

Storm Water Pollution Prevention Plan

- EPA and authorized States issue NPDES permits
<https://www.epa.gov/npdes/npdes-state-program-information>
- Industrial Storm Water Guidance
 - Developing your storm water pollution prevention plan
<https://www.epa.gov/npdes/industrial-stormwater-guidance>

EPCRA

Emergency Planning & Community Right-to-Know Act

- Any facility required to maintain SDS's under OSHA
- Facilities must submit SDS's and complete hazardous chemical inventory reporting requirements if hazardous chemicals meet threshold quantities
- State Tier II Reporting Requirements & Procedures
<https://www.epa.gov/epcra/state-tier-ii-reporting-requirements-and-procedures>

EPCRA

Federal

- Hazardous chemical threshold 10,000 lbs.
 - Hazardous Chemical: Substances for which a facility must maintain a SDS under OSHA

General – varies on density

- Diesel: 1 gallon = 7.1 lbs. (over 1,408 gallons)
- Gasoline: 1 gallon = 6.25 lbs. (over 1,600 gallons)
- Engine Oil: 1 gallon = 7.28 lbs. (over 1,373 gallons)
- Review SDS for chemical and regulatory information

State Requirements

- If you do not meet threshold capacities or program criteria for Federal plans there may be State environmental plans you are responsible to implement.
- **Example:**
 - Preparedness, Prevention and Contingency Plan (Pennsylvania)

Questions

Contact Information

Email: jeff@safetyteam.com

