The following project was a partnership with the Partners in Pollution Prevention (P3) Program through the University of Nebraska-Lincoln Department of Chemical Engineering.

On-Farm Fuel Spill Prevention, Control, and Countermeasures

Spill prevention, what is it and where did it come from?

Oil spills endanger public health, impact drinking water, devastate natural resources, and disrupt the economy. In the United States, we use large quantities of oil to complete day-to-day operations. The most common use of oil is to generate power. It allows machinery such as pumps, tractors, combines, trucks, ATVs, and other equipment to function. Due to the versatility of oil products, it is often more convenient to store the various products on site. With this convenience factor comes a risk of spilling oil, which releases harmful products into the environment.

When a spill occurs, human health and environmental quality are put at risk. Every effort must be made to prevent oil spills and clean them up promptly once they occur. The cost of preventing a spill is often much less than the cost of spill clean-up, legal fines, and other civil liabilities. As the old adage states, "an ounce of prevention is worth a pound of cure."

The purpose of the Spill Prevention, Control, and Countermeasure (SPCC) rule is to help farmers and ranchers prevent a discharge of oil into navigable waters or adjoining shorelines. This rule is part of the U.S. Environmental Protection Agency's oil spill prevention program and was published under the authority of Section 311(j)(1)(C) of the Federal Water Pollution Control Act (Clean Water Act) in 1974. The rule may be found in Title 40, Code of Federal Regulations, Part 112.

Additional Information

The agricultural SPCC law is currently being rewritten based on a USDA and EPA case study that is available on their website. Much of this law will change by the end of 2016 including the limits and the definition of a facility and navigable waters. The EPA could not comment on any of the changes that are being made, so the upcoming changes are uncertain.

Who needs to have a SPCC plan in place?

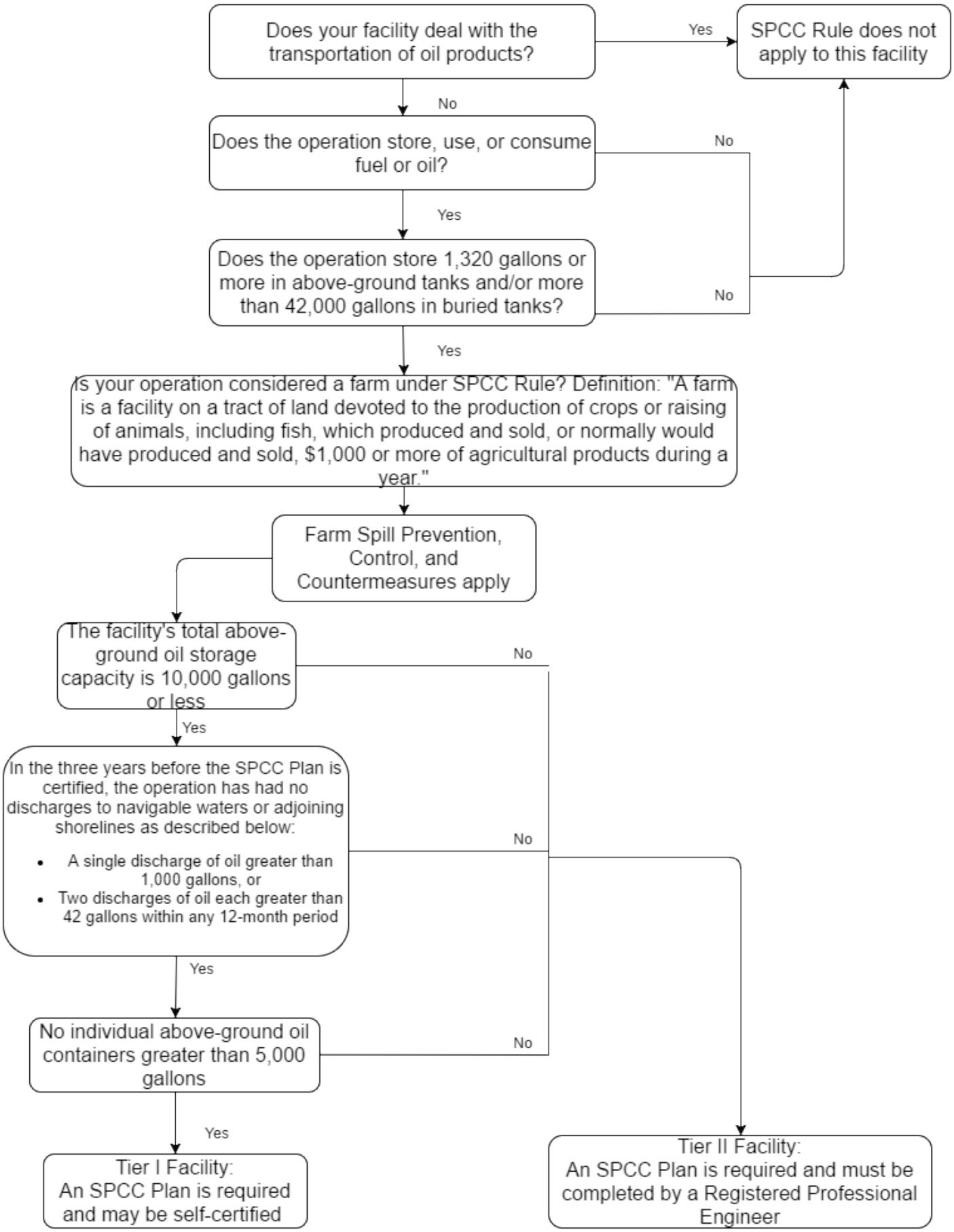
The Environmental Protection Agency (EPA) requires a farm or ranch that meets either the Tier I or Tier II SPCC requirements to have a SPCC plan in place.

The requirements for determining if you need to have a SPCC plan in place are as follows:

- Stores, transfers, uses, or consumes oil or oil products, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil, or animal fat; and
- Stores more than 1,320 total U.S. gallons in aboveground containers (This means the sum of all containers used to store oil products that have a total capacity of 55 gallons or more) or more than 42,000 total U.S. gallons in completely buried containers

Due to the nature of the requirements of the SPCC plan, a flowchart (Figure 1) has also been developed to help you determine if it is necessary to have a SPCC plan, and in the event that it is required, which tier of the SPCC plan is required.

Figure 1: Tier 1 or Tier 2 Qualification



Is your operation considered a farm?

According to the EPA, a "Farm" is: "a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, $1,000 or more of agricultural products during a year."

Getting in Compliance with the EPA

If you fit into the criteria and need a SPCC plan in place, there are some options to getting in compliance with the EPA. Listed below are some of the options and necessary requirements for getting a SPCC plan up and running.

Requirements

1. Write, or hire someone to write, a SPCC plan
2. Self-certify or have a Professional Engineer (PE) certify the SPCC plan, as necessary. *(Only Tier II requires the use of a PE. You may enlist the services of a PE for Tier I, but it is not required)*
3. Implement the SPCC plan. This will require that all oil storage facilities and spill controls such as secondary containment and overflow prevention procedures and/or devices are installed, upgraded, and in proper order.
4. Revise and update the SPCC plan as needed or at a minimum interval of every five years. This process will require documentation and may also require plan re-certification as changes occur that affect the potential for an on-farm oil spill (e.g., installation of a new container or relocation of an old container). If a reportable spill occurs, the EPA may dictate changes to a SPCC plan.

Necessary Materials

1. A list of all stationary oil containers on the farm, including location and contents
2. A brief description of the procedures used to prevent oil spills
3. A brief description of the measures installed to prevent oil from reaching water
4. A brief description of the measures that will be used to contain and clean up an oil spill, particularly a spill in close proximity to water
5. A list of emergency contacts and first responders

General FAQs

What types of oil count toward the aggregate total?
Oil of any type and in any form is covered, including, but not limited to: petroleum; fuel oil; sludge; oil refuse; oil mixed with wastes other than dredged spoil; fats, oils or greases of animal, fish, or marine mammal origin; vegetable oils, including oil from seeds, nuts, fruits, or kernels; and other oils and greases, including synthetic oils and mineral oils.

What containers count toward the total fuel storage count?
Any container with a capacity of 55 gallons or more that is being used to store oil is counted toward the total fuel storage. Examples include steel fuel storage tanks, towable fuel tanks, 55-gallon oil drums, etc.

Does a tank that is solely used for the filling of other tanks, i.e. daisy-chained, count toward the total storage capacity?
Yes, a tank that is used for the purpose of filling another tank in a daisy-chain configuration is considered part of the total storage capacity for the operation.

How do I calculate the total oil storage capacity?
Use the shell capacity of the container (maximum volume) and not the actual amount of product stored in the container (operational volume) to determine whether the SPCC rule applies to you. Count only containers with storage capacity equal to or greater than 55 U.S. gallons. Simply add up the container oil storage capacities and compare your total facility capacity to the SPCC threshold:

- A total above-ground oil storage capacity greater than 1,320 U.S. gallons; or
- A completely buried oil storage capacity greater than 42,000 U.S. gallons

Do I need to submit the SPCC plan to the EPA when completed?
No, SPCC plans should be maintained at any facility normally attended at least four hours per day or at the nearest field office if the facility is not so staffed. Submit your plan to EPA only when requested.

Does an empty tank count toward the total storage capacity?
If a tank has the capacity to hold oil than it is counted toward the total storage capacity of the operation, even if the tank does not currently have any oil contained in it. The ability for the tank to hold oil is all that matters unless the tank has been decommissioned formally, in which it then will no longer count toward the total storage capacity.

Is a tank mounted on wheels that is used to store fuel/deliver fuel, but also transported, under SPCC rule?
Any tank that is used to deliver fuel or is on the grounds stationary for an extended period of time is under EPA rule and as such requires sized secondary containment. It also counts toward the cumulative oil storage. Only when it is being transported is it under DOT rule.

What about a tanker truck trailer, is that regarded as a fuel tank?
Yes, that is considered a fuel tank and is under SPCC rule as it is being used to store fuel and deliver fuel. It is stored on the ground for an extended period of time and as such counts toward the aggregate storage of oil and requires sized secondary containment.

Additional Resources

In order to make the SPCC process as easy as possible the Nebraska Ethanol Board has a series of related information hosted on the website at:
http://ethanol.nebraska.gov/wordpress/resources/spill-prevention-control-countermeasures/

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