

Working Your Way through EPA's SPCC Plan

Modified from NDSU's Roxanne Johnson's worksheet on SPCC requirements

1. Do I Need A Spill Plan?

A. Total the number of gallons of oil products you store above ground _____

- Is this total greater than 1,320 gallons? YES NO

B. Total the number of gallons of completely buried containers _____

- Is this total greater than 42,000 gallons? YES NO

(Click here to see what is included in the gallon calculations)

- If you answered YES to one or both questions, continue on to question C.
- If you answered NO to both questions, you do not need to have an SPCC plan for your site.

C. Could an oil spill reasonably make its way to a water body of the state? YES NO

(Click here to see considerations on whether or not an oil spill could reasonably make its way into water)

- If you answered YES, continue on to section 2.
- If you answered NO, you should document this with a topographic map or other information to explain why you do not believe an oil spill could impact surface waters of the state. Keep this on file

2. Can I Self Certify?

A. Do you have **more than 10,000 gallons** of storage capacity? YES NO

- If you answered YES to A, then you fall under Tier III and are required to work with a certified Professional Engineer to develop your SPCC Plan. You cannot self-certify
- If you answered NO, continue on

B. Do ALL of your tanks fall within the **55 to 5,000 gallon** range? YES NO

C. Do ANY of your tanks fall within the **5,001 to 10,000 gallon** range? YES NO

D. In the past 3 years, have you had a spill of more than 1,000 gallons? YES NO

E. Have you had 2 spills, each exceeding 42 gallons within any 12 month period? YES NO

- If you answered YES to question B and NO to questions D and E, then you qualify to self-certify under Tier 1. You can complete the template available on the EPA SPCC website at:
<http://www.epa.gov/osweroe1/content/spcc/tier1temp.htm>
- **Click here to see what to include in your plan**
- **An example of a completed Tier I plan template from Roxanne Johnson at NDSU can be found here:** http://www.ag.ndsu.edu/waterquality/spcc-1/Fictional%20Johnson%20Farm%20Tier%20I_%202-12-11.docx/view
- If you answered YES to C, and NO to questions D and E, then you qualify for self-certification under Tier II as long as you don't determine that secondary containment is impracticable and do not use alternative methods (environmental equivalencies) to meet plan requirements.
- **Click here to see what constitutes 'environmental equivalencies'**
- **Click here to see the Tier II Requirements**
- If you answered YES to questions D or E, and you fall under the Tier I or II categories, then you **do not** qualify to self-certify. You will need to hire a P.E.
- **Click here to see exceptions to the spill rules**

Section 1: Additional Information

A-B. To determine the total number of gallons:

Include:

1. All oil products in containers 55 gallons or more
2. Farm nurse tanks – mobile refuelers
 - a. Used only for hauling fuel

Exclude:

1. Pesticide application equipment
2. Buried tanks (must be completely buried)
3. Permanently closed tanks (tank must be marked as such)
4. Heating oil for residence
5. Motive power containers
6. Loading racks

C. Could an oil spill reasonably make its way to a water body of the state?

Oil spills may be more likely during severe weather with heavy rain. For this reason, you have to consider heavy precipitation when you decide if a spill could make it to surface water. There are probably very few places in Montana where a spill could not make it to surface water during a very heavy rain. This means very few places are likely to be able to opt out of SPCC planning based on this exclusion. However, if you have paid attention during heavy rains and have never seen runoff over the surface leave the yard where you store oil and there is not a stream or ditch within a quarter mile, you could consider claiming the right to opt out of SPCC under this exclusion. Consider the following in your decision:

Assess Land:

1. Topography
2. Are there drainage ditches near where you store oil?
3. Worst-case scenarios – High precipitation / flooding events
4. Soils
5. Ephemeral streams

Water bodies of the state include - waters of the US or adjoining shorelines:

1. Lakes
2. Rivers and Streams
3. Ditches that return to streams and rivers are included

Remember, preventative measures are cheaper than being responsible for a cleaning up a spill!

Section 2: Can I Self Certify?

D & E. Exceptions to the spill rules

Do not include discharges that are the result of natural disasters, acts of war, or terrorism. When determining the applicability of this SPCC reporting requirement, the gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil that actually reaches navigable waters or adjoining shorelines not the total amount of oil spilled. EPA considers the entire volume of the discharge to be oil for the purposes of these reporting requirements.

Environmental equivalencies:

Environmental equivalencies are deviations from specific requirements of the SPCC rule that provide the same environmental protection as the original rule. A Professional Engineer (PE) must verify that these alternative methods are in accordance with good engineering practice, including consideration of industry standards, and provide environmental protection equivalent to the measures described in the SPCC rule. The PE only has to certify the changes, not the whole document.

Examples:

1. Using a preventive measure such as a predetermined, written filling procedure rather than an audible/visual alarm for overspill protection.
2. Using alternative technologies specifically engineered to prevent oil from escaping the facility containment and drainage control system, while normally allowing drainage of uncontaminated water rather than a manual open-and closed-design.
3. An environmentally equivalent approach may combine an alarm system that detects the presence of trespassers, with portable lights used to perform regular rounds of the facility.

If you find certain areas to be **impractical** or have chosen to use environmental equivalents you must have those parts certified by a professional engineer.

Impracticability. If it is determined that secondary containment is impractical and alternative control methods are established, these must be reviewed and certified in writing by a professional engineer.

If you fall within the Tier II plan guidelines, you can use the Tier I template as a guidance tool, but you need to make sure to include all other requirements. An overview of Tier II requirements are listed at the end of this document.

See the section “What to Include in Your Plan” below.

What to Include in Your Plan

1. Facility Diagram – not required for Tier I but nice to include.
 - a. Can be hand drawn
 - b. Location, size, and contents of above-ground and buried tanks
 - c. Arrows indicating direction oil will flow if there were a spill
 - d. Mobile and portable containers (55 gallons and higher)
 - i. Show where these are parked
2. Training, Inspections, and Records
 - a. Training program for oil handlers
 - b. Inspection of Tanks (see document on secondary containment in your yellow packet)
 - i. Inspections are dictated by the size of tank and your secondary containment
 - c. Designate leadership
 - d. Management approval, financial acceptance, and manpower to clean a spill
 - e. Records
 - i. Log of 5-year review cycle
 - ii. If you make changes such as adding/removing tanks, you must document the changes in your plan within 6 months
 - iii. Keep your plan at your site. Nothing needs to be sent into EPA.
3. Containment
 - a. Sized Secondary Containment
 - i. A how-to-figure containment document can be found at:
<http://www.ag.ndsu.edu/waterquality/spcc-1/Secondary%20Containment2%20Nov%202011.pdf/view>
 - b. General Secondary Containment
 - i. Intended to address the most likely oil discharge from any part of a facility. How will you stop the movement of oil should a spill occur? This can be a pan to catch the oil or floor dry to absorb the oil, a sump pump, retention pond, spill kits, etc.
 - c. Shops
 - i. You can use your shop as the containment area. Make sure the outer wall is sealed. Make sure your floor drains to a pit and emptied to a suitable site.
4. Containers
 - a. Make sure they are made for the contents
 - b. Provide overfill protection....must use one of the following
 - i. Audible air vent
 - ii. High liquid level pump cut off device set to stop flow at a predetermined level

- iii. Direct audible or code signal between the container gauger and the pump station.....most likely scenario.
 - iv. A fast response system such as a digital computer, telepulsar, or direct vision gauges. Must have person monitoring gauges.
5. Security
- a. If you live at the site, that is your security.
 - b. Put locks on the gas tanks and shop doors when not there.
 - c. Include what your plan is to secure and control, including access to the master flow, drain valve, and the starter controls on oil pumps.

Tier II Requirements

Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities).

View a sample SPCC plan here:

http://www.epa.gov/emergencies/docs/oil/spcc/guidance/D_BulkStoragePlan.pdf

Use this sample plan as a guide when developing your plan. Even though this is an example of a SPCC plan developed by certified PE, all the requirements are the same.

OR

Use mySPCC: An online program developed to assist producers in preparing a Tier I and Tier II SPCC Plan: <https://www.asmark.org/mySPCC/>

If you are the owner or operator you must:

1. Meet the general requirements for the Plan and the specific discharge prevention and containment procedures listed in this section.
2. *Facility drainage.* Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.
3. Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater.
4. Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or

catchment basins designed to retain oil. You must not locate catchment basins in areas subject to periodic flooding.

5. You may equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

6. *Bulk storage containers.* Do not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

7. Secondary containment. Provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

8. Do not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

- a. Normally keep the bypass valve sealed closed. Reseal valve following drainage.
- b. Inspect the retained rainwater to ensure that its presence does not leave a “sheen”
- c. Keep adequate records of such events.

9. Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.

10. Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

- a. High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
- b. High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

c. Direct audible or code signal communication between the container gauger and the pumping station.

d. A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

e. You must regularly test liquid level sensing devices to ensure proper operation.

10. Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

11. Position or locate mobile or portable oil storage containers to prevent a discharge. Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

12. Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

13. Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. (5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

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