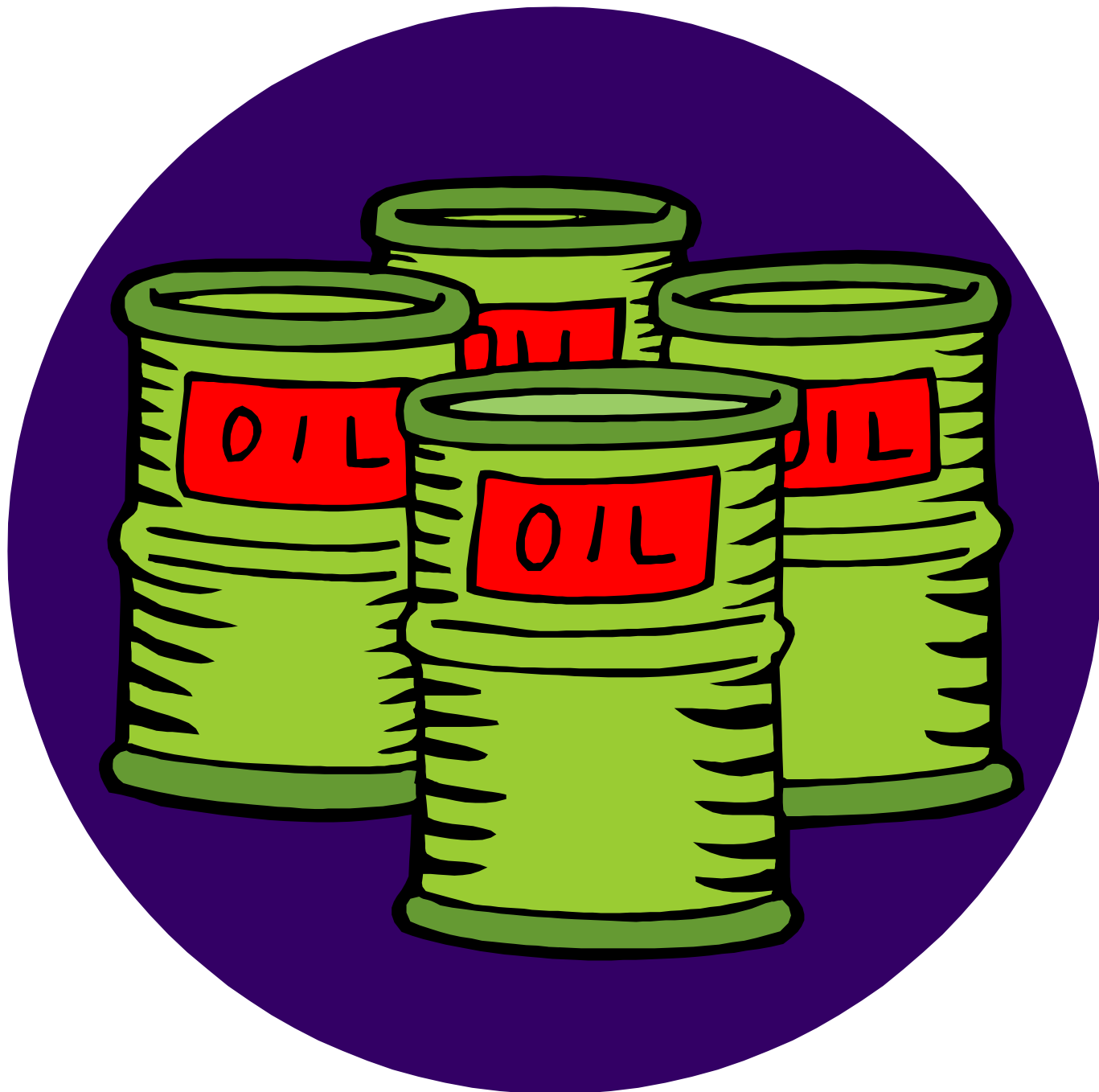


National Park Service  
US Department of the Interior

Concession Environmental Management Program  
Denver, Colorado



# Understanding Spill Prevention Control and Countermeasure (SPCC) Plans



National Park Service  
US Department of the Interior



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The National Park Service Concession Environmental Management Program does not make any guarantee or assume any liability with respect to the use of information in this guidance. It remains the sole responsibility of concessioners to review, understand and apply the appropriate federal, state and local regulations that govern this topic area. Additional consultation with qualified professionals or federal, state and local environmental agencies may be necessary to ensure a concessioner's program complies with applicable regulations.

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For more information, contact the Concession Environmental Management Program:



*GreenLine* Technical  
Assistance Number  
**303/987-6913**



*GreenLine* Email  
**NPS\_GreenLine@nps.gov**

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## Purpose of this Guidance

This document provides an overview of the requirements for developing a Spill Prevention Control and Countermeasures (SPCC) Plan, as specified in regulations promulgated by the U.S. Environmental Protection Agency (US EPA) under 40 CFR 112. The document also highlights some special SPCC considerations for concessioners operating in national parks. The **Appendix** contains an Inventory Sheet that can be used to record the types and locations of petroleum products stored onsite.

## Who Should Read This Guidance?

The SPCC Plan is a specific type of emergency response plan required by federal regulations for facilities that store oil and oil-containing products and meet certain other conditions. This guidance was written for NPS concessioners that might be subject to these SPCC Plan requirements.

According to US EPA SPCC regulations, oil includes a variety of substances that are petroleum and non-petroleum based. Some examples of oils and oil-containing products include, but are not limited to:

Petroleum-based Oils	Non-petroleum-based oils	Oil-containing Products
<ul style="list-style-type: none"> <li>• Gasoline</li> <li>• Diesel fuel</li> <li>• Motor oil</li> <li>• Heating fuel</li> <li>• Jet fuel</li> <li>• Aviation fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Animal-based oil</li> <li>• Vegetable oil</li> <li>• Biofuel</li> </ul>	<ul style="list-style-type: none"> <li>• Oil-based paint</li> <li>• Oil-based thinner</li> <li>• Oil-based ink</li> <li>• Petroleum-based parts washer solvent</li> <li>• Roofing tar</li> </ul>

### US EPA Definitions (40 CFR 112)

**Oil:** Oil of any kind or in any form, including, but not limited to:

- 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.

**Non-petroleum Oil:** Oil of any kind that is not petroleum-based, including but not limited to:

- fats, oils, and greases of animal, fish, or marine mammal origin; and
- Vegetable oils, including oils from seeds, nuts, fruits, or kernels.

**Petroleum Oil:** Petroleum in any form, including but not limited to crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

**Animal Fat:** A non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

**Vegetable Oil:** A non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plants seeds, nuts, fruits, and kernels.

## When is an SPCC Plan Needed?

The main factor in determining whether an SPCC Plan is required is the quantity of oil and oil-containing products that could be stored in a facility at any one time (i.e., the potential oil storage capacity). A concessioner may need an SPCC Plan if its facility has either of the following:

- a combined total aboveground oil storage capacity greater than 1,320 gallons;
- a combined total underground oil storage capacity greater than 42,000 gallons.

An additional factor to consider in determining whether an SPCC Plan is required is the expected outcome if an oil spill was to occur. Depending on where a concessioner is located, if it could “reasonably be expected,” over any period of time, to discharge oil into or upon “navigable waters of the United States or adjoining shorelines,” the concessioner may require an SPCC Plan. A concessioner should

keep in mind that this criterion has been broadly interpreted, and applying it at a facility is not as simple as determining whether there is a stream or lake nearby. Instead, a concessioner must consider potential oil discharge routes such as storm sewers and gullies that may eventually discharge to a water body that could be many miles away. Discharges to the ground that could enter groundwater and ultimately connect to surface waters, such as a river or wetland, also should be considered.

An SPCC Plan is needed if:

- The potential oil storage capacity of oil and/or oil-containing products at a facility exceed the EPA-specified threshold; and
- The oil and/or oil-containing products can be reasonably expected to discharge to navigable waters.

A concessioner must make sure that it has properly assessed whether an SPCC Plan is required. Misinterpretation on how the US EPA applies the SPCC Plan applicability criteria may lead concessioners to conclude they need a plan when they do not or more importantly, that they do not need a plan when they are actually subject to the requirement. Concessioners must make sure that the oil and oil-containing storage capacity is correctly counted, and their “facility” has been correctly defined. These two factors are described in more detail in the next two sections.

## How Do You Determine Total Oil Storage Capacity?

To determine whether a facility exceeds US EPA-specified thresholds and therefore requires an SPCC Plan, a concessioner must determine its total oil storage capacity. Total oil storage capacity is the maximum capacity of all oil storage containers at the facility that have a capacity of 55 gallons or greater including all containers of oil containing equipment such as transformers.

Empty containers such as 55-gallon drums and unused tanks that could be put in service to store oil must also be counted towards a facility’s total oil storage capacity.

Wastes or products awaiting recycling, such as used engine oil, waste antifreeze, and even water contaminated with small amounts of petroleum product, must also be counted towards a facility's total oil storage capacity if they are in containers of 55 gallons or greater since they "contain oil" as defined by the US EPA.

The **Appendix** has a blank Inventory Sheet that can help a concessioner determine its total oil storage capacity for a facility.

**What about Underground Vehicle Fuel and Heating Fuel Tanks?**

"Completely buried oil containers" such as underground storage tanks do not count toward a facility's total oil storage capacity if they are regulated under:

- 40 CFR 280 (Technical Standards and Corrective Action Requirements For Owners and Operators Of Underground Storage Tanks (UST)), or
- a state-approved program under 40 CFR 281 (Approval of State Underground Storage Tank Programs).

Most vehicle fuel tanks are covered under 40 CFR 280 and therefore do not need to be counted. However, heating fuel underground storage tanks are exempt from regulation under 40 CFR 280 and are typically exempt from regulation under state-approved underground storage tank programs. As a result, heating fuel underground storage tanks may need to be included in an SPCC Plan.

**The SPCC and Applicable Storage Containers**

Consider a facility with the following:

- One 1,000-gallon aboveground heating oil storage tank
- Two 55-gallon drums containing virgin oil
- Two 30-gallon drums containing grease
- One 55-gallon drum containing used motor oil
- One 55-gallon drum containing waste kitchen grease
- One normally empty 55-gallon drum staged for possible use to collect contaminated gasoline
- One hydraulic press with a 20-gallon hydraulic oil reservoir

What would be the facility's total oil storage capacity under the SPCC rule?

Container Type and Contents	Capacity (gal)	Number of Containers	Total Oil Storage Capacity Under SPCC Rule (gal)	Comments
aboveground storage tank with heating oil	1000	1	1000	
drum with virgin oil	55	2	110	
drum with grease	30	2	NA	Below container size threshold
drum with used motor oil	55	1	55	
drum with waste kitchen grease	55	1	55	
drum normally empty; collects contaminated gas	55	1	55	Capacity is 55 gal, even if contents are empty.
hydraulic press reservoir with hydraulic oil	20	1	NA	Below container size threshold

As a result, the applicable total oil storage capacity is 1,275 gallons aboveground, and the facility may not need an SPCC Plan.

## What is the Definition of “Facility”?

The requirement for an SPCC Plan is based on the total oil storage capacity at the “facility,” which is defined as a continuous piece of property. The boundaries of one piece of property are based on a variety of factors, including, but not limited to:

- Building ownership
- Building operation
- Equipment ownership
- Equipment operation.

It can be confusing to define a concessioner’s “facility” because the property on which a concessioner operates is actually owned by the federal government. If the “facility” definition is limited to the property or areas assigned to the concessioner under the Concession Contract, a concessioner may not need to be included in an SPCC Plan because its total oil storage capacity may fall below US EPA-specified thresholds. However, if the “facility” is defined as the entire park (i.e., properties on which both concessioners and park operate), then the combined park and concessioners’ total oil storage capacities may exceed US EPA-specified thresholds and this same concessioner may be subject to SPCC Plan requirements.

The concessioner should coordinate with the park to determine whether its total oil storage capacity should be counted apart from the park (i.e., the “facility” is limited to only the property on which the concessioner operates) or as part of the park (i.e., the “facility” is the entire park), or in some other manner. The concessioner and the park may need to jointly work with the US EPA Region to obtain regulatory interpretation on how the SPCC “facility” definition should be interpreted for their situation.

## Who is Responsible for the SPCC Plan?

Concessioners may be “assigned” and given operational responsibility for managing gas stations and associated tanks, purchasing fuel for and maintaining heating oil tanks, collecting and disposing of used oil, or other oil storage-related activities under the Concession Contract. Although equipment may be “assigned” to the concessioner, in most situations the park owns the facilities. In some cases, the park may also be responsible for preventative maintenance for this equipment.

US EPA guidance states that “the owner or operator must take responsibility for ensuring compliance with the SPCC requirements.” The park may include SPCC requirements in the Concession Contract, operating plan, and/or maintenance plan.

Concessioners should consult with the park to clearly define SPCC roles and responsibilities, especially where ownership and operational responsibilities intertwine. This includes determining who will prepare and maintain the SPCC Plan, and park/concessioner responsibilities in implementing the SPCC Plan. Even if the park is

preparing and maintaining the SPCC Plan, the concessioner should actively participate in its development so that its operations are accurately described, and so that it has input on procedures for which it will be held responsible. Some concessioner responsibilities under a park SPCC Plan may include procedures for fuel deliveries, tank inspections, and first response for oil releases.

Concessioners must make sure that all their applicable oil storage facilities are included in the SPCC Plan, regardless of whether the park or concessioner takes the lead in its preparation. This includes not only large oil storage facilities that are park-owned and concessioner-operated such as tanks, but also oil storage containers down to 55 gallons in size for which concessioners might be individually responsible.

## Elements of an SPCC Plan

The SPCC Plan should clearly address the following three topics:

- Operating procedures implemented to prevent oil spills;
- Control measures installed to prevent a spill from reaching navigable waters; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

How these three topics are addressed will be unique to the facility, operation, and location. Development of an SPCC Plan requires detailed knowledge of the facility and the potential effects an oil spill could have on the resources.

Each SPCC Plan, while customized to the facility it covers, must include certain standard elements to ensure compliance with SPCC regulations. SPCC Plan requirements include the following:

- Discussion of the facility's conformance with applicable SPCC requirements;
- Description of the facility's physical layout, which includes a facility diagram. The facility diagram must include all transfer stations and connecting pipes, and mark the location and contents of each container and include completely buried tanks that are otherwise exempted from SPCC regulations;
- Discharge prevention measures including procedures for routine handling of products;
- Discharge or drainage control;
- Explanation of regulatory applicability (i.e., how the threshold was exceeded);
- General facility description including name, function, and drainage patterns;
- Facility diagram which indicates the locations of oil storage and handling;
- Description of oil storage and handling areas;
- Description of spill events in the previous 12 months;
- Analysis of potential spill scenarios including predictions of direction and rate of flow and total quantities of oil that could be released;
- Designation of SPCC responsibilities including a Spill Coordinator;

The Facility Diagram must identify the location of underground storage tanks regulated under 40 CFR 280 and 281, even though they do not need to be otherwise addressed in the SPCC Plan. The Facility Diagram should identify these storage facilities as "Exempt."



- Description of spill containment and drainage control structures and equipment for oil storage and handling facilities;
- Description of spill emergency response equipment;
- Description of spill notification procedures;
- Oil Spill Contingency Plan describing spill response and cleanup procedures including coordination with other concessioners, park personnel, local authorities and spill response contractors;
- Spill Prevention Plan including inspection and monitoring program, tank integrity testing procedures, preventive maintenance and housekeeping procedures, formal spill response training and exercises and security measures;
- Documented review and update of procedures every 5 years;
- Certification that a Substantial Harm Analysis has been conducted and that the facility is either not subject to Facility Response Plan (FRP) requirements or that an FRP has been completed;
- Professional engineer’s certification; and
- Management approval.

The SPCC Plan must be “a carefully thought-out plan prepared in accordance with good engineering practice.” In preparing the SPCC Plan, the park and concessioner should consider the best way to present the information for the facility. Separate sections in the SPCC Plan addressing individual locations, or even separate plans for each location may be an effective strategy to present a clear and concise SPCC Plan.

## SPCC Equipment Requirements

SPCC regulations require that appropriate spill, leak containment, and/or drainage control structures or equipment are available in oil storage and handling areas. These may include one or more of the following:

### Onshore Facilities<sup>1</sup>

- Dikes, berms, retaining walls, curbing
- Culverting, gutters, other drainage systems
- Weirs, booms, other barriers
- Spill diversion or retention ponds
- Sorbent materials

### Offshore Facilities<sup>2</sup>

- Curbing, drip pans
- Sumps and collection systems

Other equipment requirements include the provision of valves or other positive means to prevent spillage or leakage and restrain drainage from diked areas, and oil retention ponds, lagoons, or catch basins to collect drainage from undiked areas. If this equipment cannot be practically installed, then:

<sup>1</sup> Onshore facility means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation related facility.

<sup>2</sup> Offshore facility means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation related facility.

- The reasoning must be documented in the SPCC Plan;
- The concessioner must conduct periodic integrity testing of bulk storage containers and periodic integrity and leak testing of bulk storage containers' valves and piping; and
- The SPCC Plan Oil Spill Contingency Plan section must clearly demonstrate other means to control releases.

## Implementing the SPCC Plan

There is more to SPCC regulations than preparing the plan and installing equipment. Like any documented procedure, the SPCC Plan is not useful if it is not effectively implemented. An SPCC Plan typically requires:

- Maintenance of spill containment devices;
- Maintenance of spill control equipment; and
- Monitoring and inspection of oil storage facilities.

SPCC training is also required. Concessioners must ensure that everyone involved understands their SPCC Plan responsibilities, and that adequate resources and staff are available to carry out these responsibilities.

## Recent Changes to SPCC Plan Requirements

Amendments to the Oil Pollution Prevention regulation (the SPCC regulations) were published in the July 17, 2002 Federal Register and took effect August 16, 2002. An interim Oil Pollution Prevention rule was also published in the January 9, 2003 Federal Register. As a result of these amendments, some concessioners may no longer require an SPCC Plan. SPCC planning and operational changes have also been introduced. Some of these changes are listed below:

- The applicable storage container types and capacity thresholds have changed.
  - An SPCC Plan is no longer required based on the presence of a single aboveground oil storage container with a capacity of 660 gallons or more.
  - Oil storage containers less than 55 gallons in capacity are now exempt from consideration when calculating total aboveground oil storage capacity, and when developing SPCC Plans.
  - Completely buried storage tanks regulated under 40 CFR Parts 280 or 281 are now exempt from consideration when calculating total aboveground oil storage capacity and are exempt from SPCC management requirements (except they must be marked on a Facility Diagram if the facility requires an SPCC Plan).
  - Facilities used exclusively for wastewater treatment are exempt from SPCC regulations. (Oil-water separators do not meet this definition and are not exempt.)

- SPCC Plans must be reviewed a minimum of once every five years (instead of every three years).
- Aboveground containers (e.g., tanks) require regularly scheduled non-destructive shell testing (in addition to visual inspection).
- If there is a single discharge of more than 1,000 gallons, or at least two discharges of more than 42 gallons in any 12-month period, it must be reported to the US EPA.

Concessioners with SPCC Plans already in place should review the revised regulations to determine whether their plans need to be updated or amended to ensure compliance with the regulation. Per regulation, all facilities must have their SPCC Plans comply with the new regulations by April 17, 2003). After the SPCC Plan is revised, the facility has an additional six months (i.e., until October 18, 2003) to implement the changes.



In some cases, concessioners may no longer be required to have an SPCC Plan. If this is the case, it is still a recommended Best Management Practice (BMP) for these concessioners to develop and implement a plan and install and maintain equipment for preventing and cleaning up oil spills and releases to minimize environmental impacts and help ensure sound environmental management.

## The SPCC Plan and Other Concessioner Emergency Response Plans

### 1. **Facility Response Plan (FRP) and Vessel Response Plan (VRP)**

In some cases, a concessioner may transport and store oil in vessels over water. If the quantity of oil exceeds certain thresholds, a Facility Response Plan (FRP) (40 CFR 112.20) and/or Vessel Response Plan (VRP) (33 CFR 154, 155, 156) may be required for both the onshore facility and vessel. These plans are in addition to, and not a replacement for, the SPCC Plan.

**Facility Response Plan (FRP):** The SPCC regulations at 40 CFR 112.20 describe how a facility can determine if it needs to develop and implement an FRP.

**Marine Facility Response Plan / Vessel Response Plan (VRP):** U.S. Coast Guard regulations (33 CFR 154, 155, 156 – Facilities transferring oil or hazardous materials in bulk) describe when and how a facility should develop and implement a marine FRP and VRP.

### 2. **Emergency Response Plan (ERP)**

If concessioner employees are expected to stop and/or clean up hazardous substance spills and releases, the concessioner is required to develop and implement an Emergency Response Plan (ERP) under OSHA regulations (29 CFR 1910.120). The Occupational Safety and Health Administration (OSHA) defines oil and oil-containing products as hazardous substances. As a result, if SPCC regulations apply to a concessioner and oil spill response will take place, both an SPCC Plan and an ERP is required.

### 3. **Integrated Contingency Plan (ICP)**

To reduce redundancy, regulators allow Integrated Contingency Plans (ICPs) to be prepared. If a concessioner decides to prepare an ICP in place of a standalone SPCC Plan, FRP, VRP, and/or ERP, the concessioner must ensure that the ICP addresses all regulatory requirements under all applicable programs. A cross-reference should be provided at the beginning of the ICP that identifies where each regulatory-mandated topic (e.g., OSHA ERP requirements and US EPA SPCC Plan requirements) is addressed in the ICP.

An SPCC Plan only addresses oil and oil-containing products. The Emergency Response Plan (ERP) is not limited to oil. The ERP should address nonincidental releases from all hazardous substances, not just oil.

## Additional Information

Resource Type	Name	Description	Source
website	Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities	SPCC rule and summaries of changes that were published in the July 17, 2002 Federal Register and that took effect August 16, 2002	US EPA <a href="http://www.epa.gov/fedrgstr/EPA-WATER/2002/July/Day-17/w16852a.htm">www.epa.gov/fedrgstr/EPA-WATER/2002/July/Day-17/w16852a.htm</a>
document	NPS Fuel Storage Management Handbook	Provides detailed information on managing fuel storage, including regulatory requirements, design guides, and a model SPCC Plan	NPS Concession Environmental Management Program <i>GreenLine</i> Technical Assistance Number 303/987-6913
phone number	RCRA, Superfund & EPCRA Call Center	Provides up-to-date information on the Resource Conservation and Recovery Act (RCRA), among other environmental areas, including universal waste regulations.	US EPA 1-800-424-9346
website	Oil Program	Provides information on SPCC Plans	US EPA <a href="http://www.epa.gov/oilspill/index.htm">www.epa.gov/oilspill/index.htm</a>
document	EnviroCheck Sheet: SPCC Planning	Multi-page document used as a tool during NPS environmental audits	NPS Concession Environmental Management Program <i>GreenLine</i> Technical Assistance Number 303/987-6913
document	Guidance for Writing an Emergency Response Program	Guidance written specifically for concessioners on writing an Emergency Response Program	NPS Concession Environmental Management Program <i>GreenLine</i> Technical Assistance Number 303/987-6913



## **Appendix Inventory Sheet**

Background: Concessioners can use this Inventory Sheet to assess their storage capacity for oil-containing products. This Inventory Sheet can be a useful tool to document and communicate oil storage capacity to park management and staff as well as to environmental regulatory agencies. It will also provide the basic information needed for developing the SPCC Plan.

