



# 40 C.F.R. Section 112.7 General SPCC Requirements

- Full approval of management
- Written Plan
  - Use sequence of Part 112
  - If not in sequence, then include a cross-reference section

# **General SPCC Requirements**

**If there are additional facilities or procedures, methods, or equipment not yet fully operational, discuss in separate paragraphs, including the details of installation and operational start-up.**

# General SPCC Requirements

- (a)(1) Include a complete discussion of the facility's conformance with the applicable requirements of Part 112.**
  
- (a)(2) Allows deviations from most of the substantive requirements, provided that the owner/operator:**
  - Explains reason(s) for nonconformance**
  - Provides equivalent environmental protection with an alternate measure**

# Rationales for a Deviation

- Facility owner or operator can show that the particular requirement is inappropriate for the facility because of good engineering practice considerations or other reasons, such as:
  - Safety
  - Cost
  - Geographical constraints
  - Appropriateness of a particular requirement based on site-specific considerations
  - Other factors consistent with engineering principles

§ 112.7(a)(2)

# Environmentally Equivalent Measures

- The SPCC plan must be certified by the PE who has verified that the measures are appropriate and meet good engineering practices.
- Cannot rely solely on measures that are already required by other parts of the rule.
- Need not be a mathematical equivalence.

# SPCC Requirements Subject to Environmental Equivalence Provision

- Most technical elements of the rule (§§112.7 through 112.12)
- **Not** secondary containment requirements
- **Not** certain provisions of §112.7, including the general recordkeeping and training provisions
- **Not** the administrative provisions of the rule §§112.1 – 112.5 (including definitions)

§ 112.7(a)(2)

# Policy Issues Addressed by Guidance Document for Environmental Equivalence

- **Examples meant to clarify selected rule provisions**
  - Security
  - Facility Drainage
  - Corrosion Protection and Leak Testing of Completely Buried Metallic Storage Tanks
  - Overfill Prevention
  - Piping
  - Inspection, Evaluation and Testing (addressed in Chapter 7 of guidance)

§ 112.7(a)(2)

# Facility Diagram

Description of the physical layout of the facility and include a **diagram** showing:

- the location and contents of each container;
- the location of any completely buried storage tanks that are otherwise exempted from the SPCC regulation;
- all transfer (loading and unloading) stations and connecting piping; and
- all other containers not subject to the rule (water tanks).

§ 112.7(a)(3)

# Facility Diagram

- **The 2009 amendments clarify that the facility diagram must include all *fixed* (i.e., not mobile or portable) containers.**
- **For mobile or portable containers, the diagram must show:**
  - **The *area* of the facility on the diagram where such containers are stored.**
  - **The number of containers, contents, and capacity of each container, unless a separate description is provided in the SPCC Plan.**

# Facility Diagram

- Facility diagram must include all transfer stations and connecting pipes.
- Complex systems may be represented in a less detailed manner as long as more detailed drawing of pipes (blueprints, engineering diagrams) are maintained at the facility.
- Also may be acceptable:
  - Schematic representations that provide a general overview of the piping service
  - Overlay diagrams showing different portions of the piping system

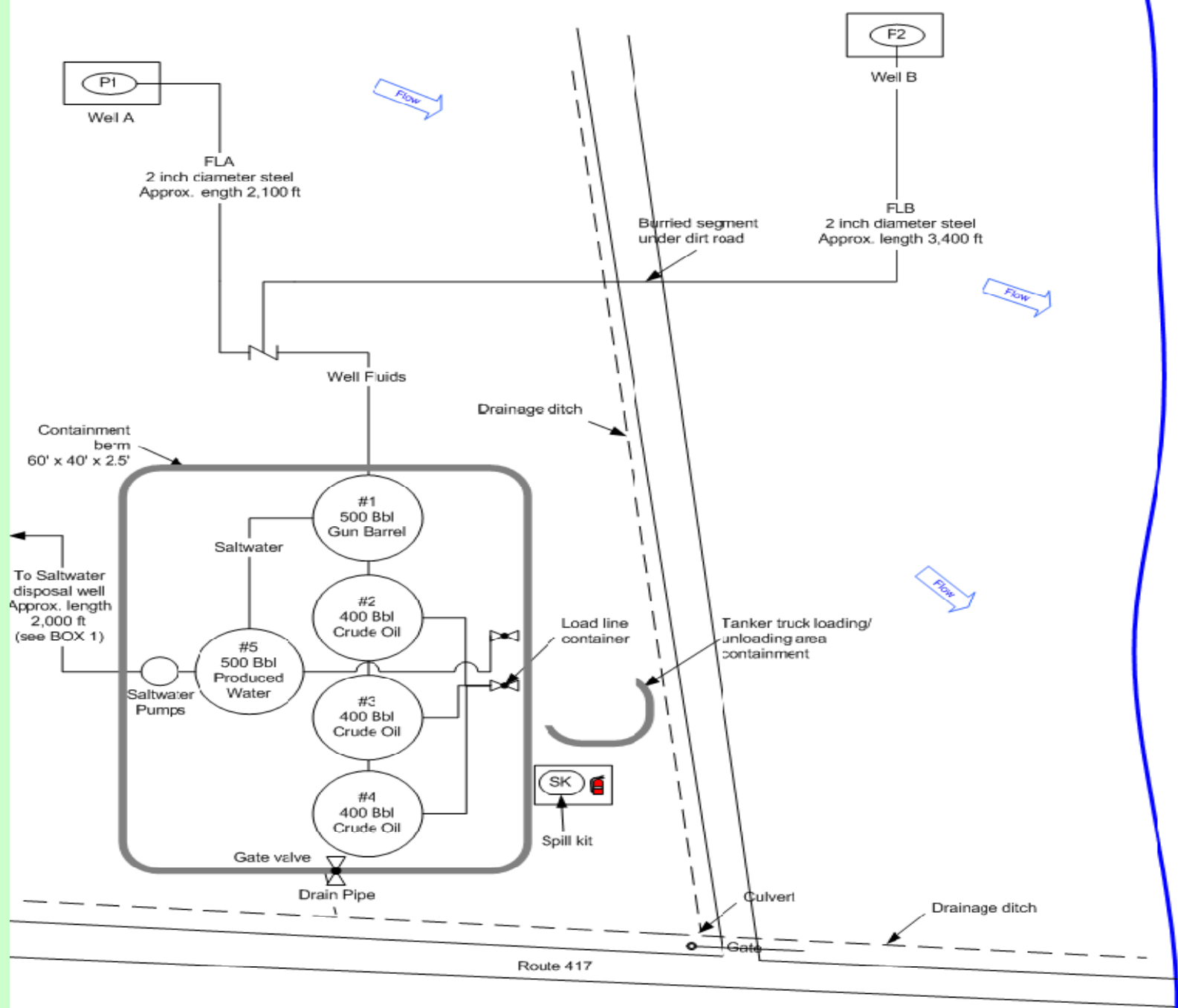
# Facility Diagram Level of Detail

**The diagram should provide sufficient detail for:**

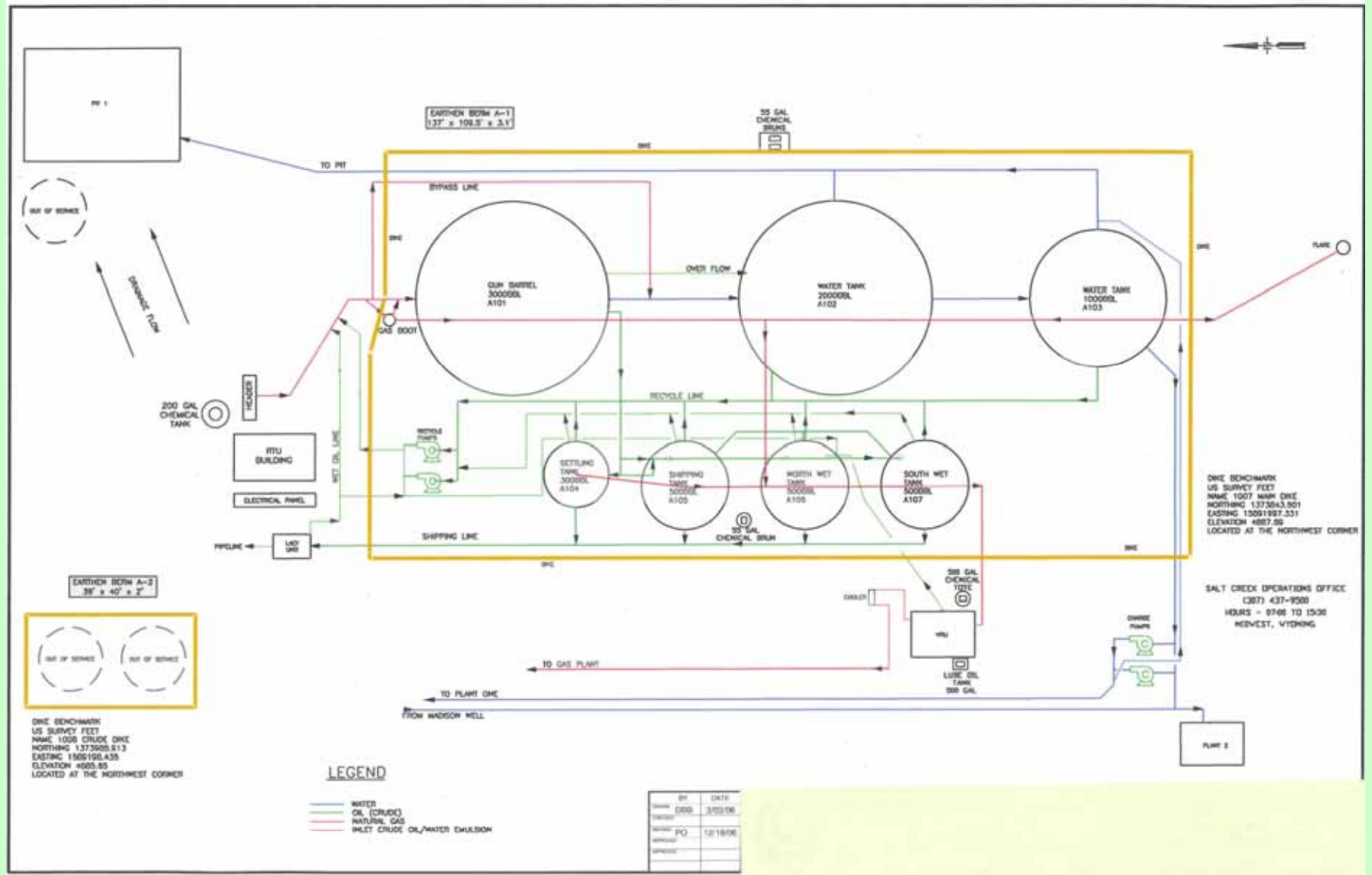
- **Facility personnel to undertake prevention activities;**
- **EPA to perform an effective inspection; and**
- **Responders to take effective measures.**

**§ 112.7(a)(3)**

# Facility Diagram Clarification



# Facility Diagram Clarification



# General SPCC Requirements

## **(a)(3) Describe:**

- (i) Type of oil in each container and its storage capacity;**
- (ii) Discharge prevention measures and procedures for routine handling of products (loading/unloading, and facility transfers, etc.);**
- (iii) Discharge or drainage controls such as secondary containment around containers; and other structures, equipment, and procedures for control of a discharge;**

**§ 112.7(a)(3)**

# General SPCC Requirements

## **(a)(3) Describe:**

- (iv) Countermeasures for discharge discovery, response, and cleanup, both the facility's capability and those that might be required of a contractor, and**
  
- (v) Methods of disposal of recovered materials in accordance with applicable legal requirements.**

# General SPCC Requirements

**(a)(3)(vi) Include a contact list and phone numbers for:**

- Response coordinator for the facility;
- National Response Center;
- Cleanup contractors with whom the facility has an agreement for response; and
- All appropriate Federal, State, and local agencies, including **Tribal agencies**.

# General SPCC Requirements

**Provide information and procedures to enable a person reporting a discharge to relate information on:**

- The exact address or location and phone number of the facility;
- The date and time of the discharge;
- The type of material discharged;
- Estimates of the total quantity discharged;
- Estimates of the quantity discharged that may be harmful;
- The source of the discharge;
- A description of all affected media;

§ 112.7(a)(4)

# General SPCC Requirements

**Provide information and procedures to enable a person reporting a discharge to relate information on: (cont.)**

- The cause of the discharge;
- Any damages or injuries caused by the discharge;
- Actions being used to stop, remove, and mitigate the effects of the discharge;
- Whether an evacuation may be needed; and
- The names of individuals and/or organizations who have also been contacted.

§ 112.7(a)(4)

# General SPCC Requirements

**Organize portions of the Plan describing procedures the facility will use when a discharge occurs in a way that will make them readily usable in an emergency, and include appropriate supporting material as appendices.**

**§ 112.7(a)(5)**

# Equipment Failure Prediction

Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of discharge), include a prediction of the **direction, rate of flow, and total quantity** of oil that could be discharged from the facility as a result of **each type** of major equipment failure.

# Equipment Failure Prediction

**TABLE B-1 SITE SPECIFIC DATA**

FACILITY NAME: A Battery

DATE: 1/31/07

EQUIPMENT	CONTENTS	CAPACITY	TYPE	FIELD CONST.?	TYPE OF FAILURE	RATE (bbl/hr)	FLOW DIRECTION	CONTAINMENT
<b>TANKS/CONTAINERS</b>								
Shipping Tank A105	Crude Oil	500 bbls	Steel	No	Structural Failure/Spill	20	NE	Earthen Berm A-1
North Wet Tank A106	Crude Oil	500 bbls	Steel	No	Structural Failure/Spill	20	NE	Earthen Berm A-1
South Wet Tank A107	Crude Oil	500 bbls	Steel	No	Structural Failure/Spill	20	NE	Earthen Berm A-1
Water Tank A102	Produced Water	2000 bbls	Steel	Yes	Structural Failure/Spill	2097	NE	Earthen Berm A-1
Water Tank A103	Produced Water	1000 bbls	Steel	Yes	Structural Failure/Spill	2097	NE	Earthen Berm A-1
Lube Oil Tank	Lube Oil	500 gals*	Steel	No	Structural Failure/Spill	6	NE	Steel Containment Structure
<b>HEATER TREATERS</b>								
<b>SEPARATORS</b>								
Gun Barrel A101	Crude Oil/ Produced Water	3000 bbls*	Steel	Yes	Structural Failure/Spill	2097	NE	Earthen Berm A-1
Settling Tank A104	Crude Oil	300 bbls	Steel	No	Structural Failure/Spill	20	NE	Earthen Berm A-1
<b>TOTAL SPCC STORAGE VOLUME: UP TO 7812 BARRELS</b>								

§ 112.7(b)

# General Secondary Containment

- Requires secondary containment for all areas with the potential for a discharge
- Requires appropriate containment and/or diversionary structures to prevent a discharge that may be harmful (§112.1(b))
- Must be constructed so that any discharge will not escape the containment system before cleanup occurs.
- General facility requirement with no sizing or freeboard requirements
- Addresses the *most likely oil discharge* from any part of a facility.

§ 112.7(c)

# Active Measures

- **Active measures can include:**
  - Placing a properly designed storm drain cover over a drain to contain a potential spill in an area where a transfer occurs, **prior** to the transfer activity;
  - Placing a storm drain cover over a drain in reaction to a discharge, before the oil reaches the drain;
  - Using spill kits in the event of an oil discharge;
  - Use of spill response capability (spill response teams) in the event of an oil discharge;
  - Closing a gate valve that controls drainage from an area prior to a discharge.

# General Secondary Containment

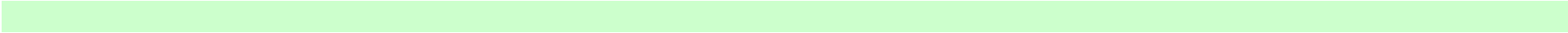
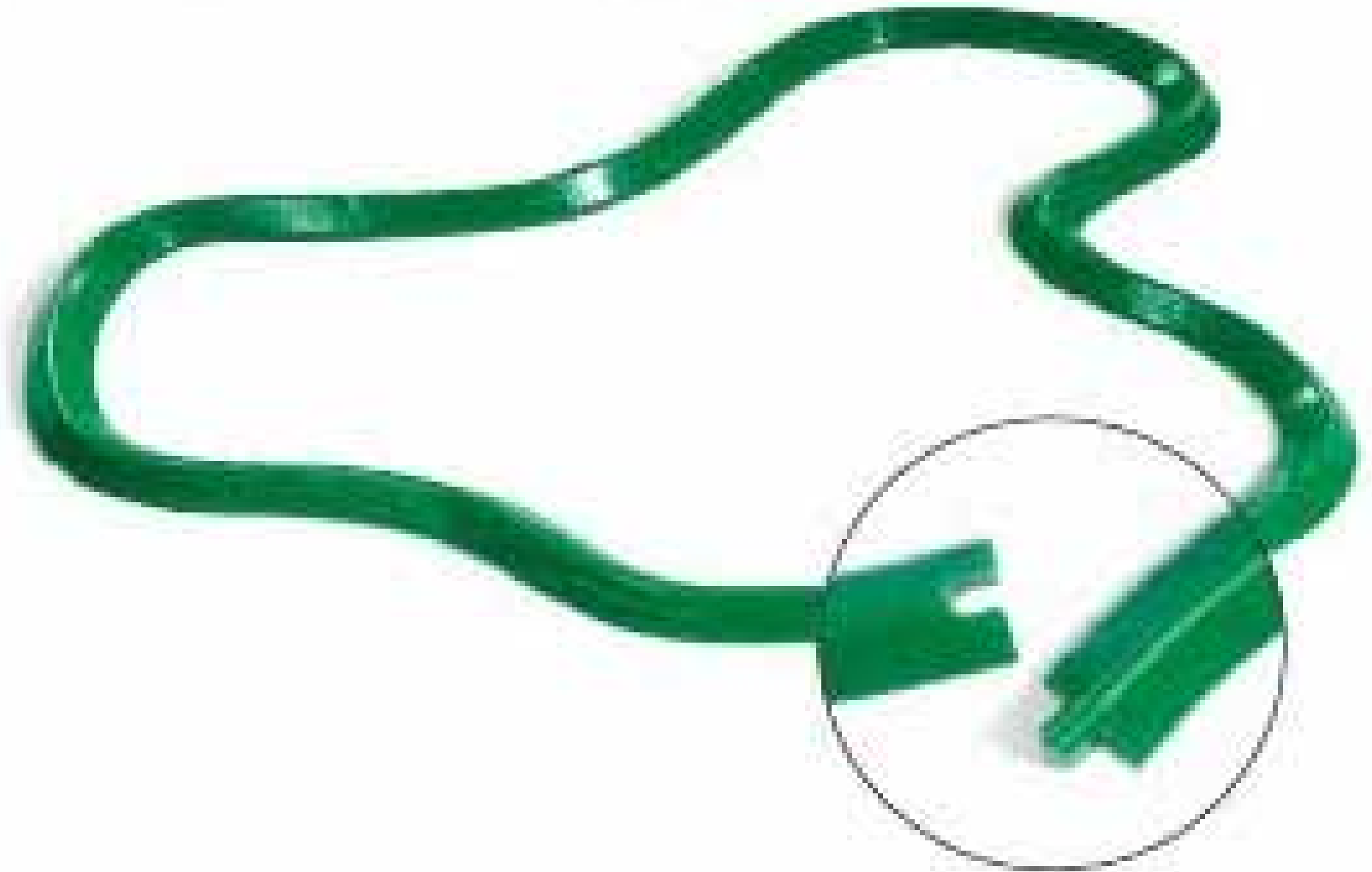
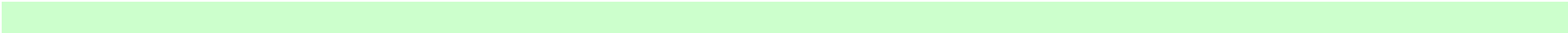
**At a minimum, you must use one of the following prevention systems or its equivalent:**

- **Dikes, berms, or retaining walls sufficiently impervious to contain oil;**
- **Curbing or drip pans;**
- **Sumps and collection systems;**
- **Culverting, gutters, or other drainage systems;**
- **Weirs, booms, or other barriers;**
- **Spill diversion ponds;**
- **Retention ponds; or**
- **Sorbent materials.**

**§ 112.7(c)(1)**









# Non-Transportation-Related Tank Trucks

- **Non-transportation-related tank trucks, including mobile refuelers and nurse tanks, are exempted from the sized secondary containment requirements.**
- **The general secondary containment requirements still apply.**



# Specific Secondary Containment Requirements

- Areas where certain types of containers, activities, or equipment are located may be subject to additional more stringent containment requirements.
- Specific minimum size requirements for secondary containment for the following areas:
  - Bulk storage containers
  - Loading/unloading racks
  - Mobile or portable bulk storage containers







# Contingency Plan

**If the facility determines that the installation of the structures or pieces of equipment for providing general or sized secondary containment are not practicable, the facility must:**

- explain in the plan why such measures are not practicable;**
- prepare an oil spill contingency plan with all elements described in 40 CFR Part 109; and**
- provide a written commitment of manpower, equipment, and materials to control and remove any harmful quantity of oil discharged.**

**§ 112.7(d)**

# Elements of a Contingency Plan

- **Authorities, responsibilities, and duties of all persons, organizations, or agencies involved in removal operations**
- **Notification procedures for the purpose of early detection and timely notification of an oil discharge:**
  - **Critical water use areas;**
  - **List of names/telephone numbers/addresses of responsible persons;**
  - **Reliable and interconnectible communications;**  
**and**
  - **Procedures for requesting assistance.**

# Elements of a Contingency Plan

- **Provisions to ensure that full resource capability is known and can be committed during an oil discharge:**
  - **Identification and inventory of equipment, materials and supplies locally and regionally;**
  - **Estimate of equipment, materials and supplies required for anticipated maximum oil discharge;**
  - **Development of agreements/arrangements for obtaining required equipment, materials and supplies.**

# Elements of a Contingency Plan

- **Provisions for well-defined and specific actions to be taken after discovery and notification of an oil discharge:**
  - **Oil response operating team of trained, prepared and available operating personnel;**
  - **Properly qualified oil discharge response coordinator with responsibility and authority for directing and coordinating response operations;**
  - **Preplanned location for a oil response operations center and reliable communications system for directing response operations;**
  - **Provisions for varying degrees of response effort based upon the severity of the discharge; and**
  - **Specification of the order of priority for protection of water uses.**

# Elements of a Contingency Plan

- **Procedures to facilitate recovery of damages and enforcement measures**

**A checklist for elements required by Part 109 and a sample contingency plan are available in the *SPCC Guidance for Regional Inspectors*.**

# Contingency Plans

- **If used for bulk storage containers, the facility also must also conduct both periodic integrity testing of the containers and integrity and leak testing of the valves and piping.**
- **The contingency plan option is also available, with specific requirements, for piping and oil-filled equipment.**

# Active Measures vs. Contingency Plan

- **Active secondary containment requires a deployment action; it is put in place prior to or immediately upon discovery of an oil discharge.**
  - **The purpose of these measures is to contain an oil discharge before it reaches navigable waters or adjoining shorelines.**
- **A contingency plan is a detailed oil spill response plan.**
  - **The purpose of a contingency plan should be both to outline response capability or countermeasures to limit the quantity of a discharge reaching navigable waters or adjoining shorelines, and to address response to a discharge of oil that has reached navigable waters or adjoining shorelines.**

# Inspections, Tests and Records

## Facilities must:

- Conduct inspections and tests in accordance with written procedures developed by the facility or by the engineer who certifies the facility Plan.
- Keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of **three** years.
- Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this requirement.

# Personnel, Training and Discharge Prevention Procedures

Train facility **oil-handling** personnel in:

- the operation and maintenance of equipment;
- response procedures;
- applicable pollution control laws, rules and regulations;
- general facility operations; and
- the contents of the facility SPCC Plan.

Designate a person accountable for discharge prevention.

Schedule and conduct discharge prevention briefings for facility oil-handling personnel **at least once a year**.

§ 112.7(f)

# Security Requirements

(excluding oil production facilities)

**Describe** in plan how facility will:

- Prevent unauthorized access to starter controls on oil pumps;
- Secure out-of-service and loading/unloading connections of oil pipelines;
- Secure and control access to all oil handling, processing and storage areas;
- Secure master flow and drain valves; and
- Address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.







# Loading/Unloading Racks

**Secondary containment requirements for Loading/Unloading Racks are found in §112.7(h).**

**Secondary containment requirements for Loading/Unloading Areas are found in §112.7(c).**

# Loading/Unloading Rack

**Loading/unloading rack means a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part. A loading/unloading rack includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices.**

# Loading/Unloading Arm

- **A loading/unloading arm is a key component of a loading/unloading rack.**
- **A loading/unloading arm is typically a movable piping assembly that may include fixed piping or a combination of fixed and flexible piping, typically with at least one swivel joint (that is, at least two articulated parts that are connected in such a way that relative movement is feasible to transfer product via top or bottom loading/unloading to a tank truck or rail car).**





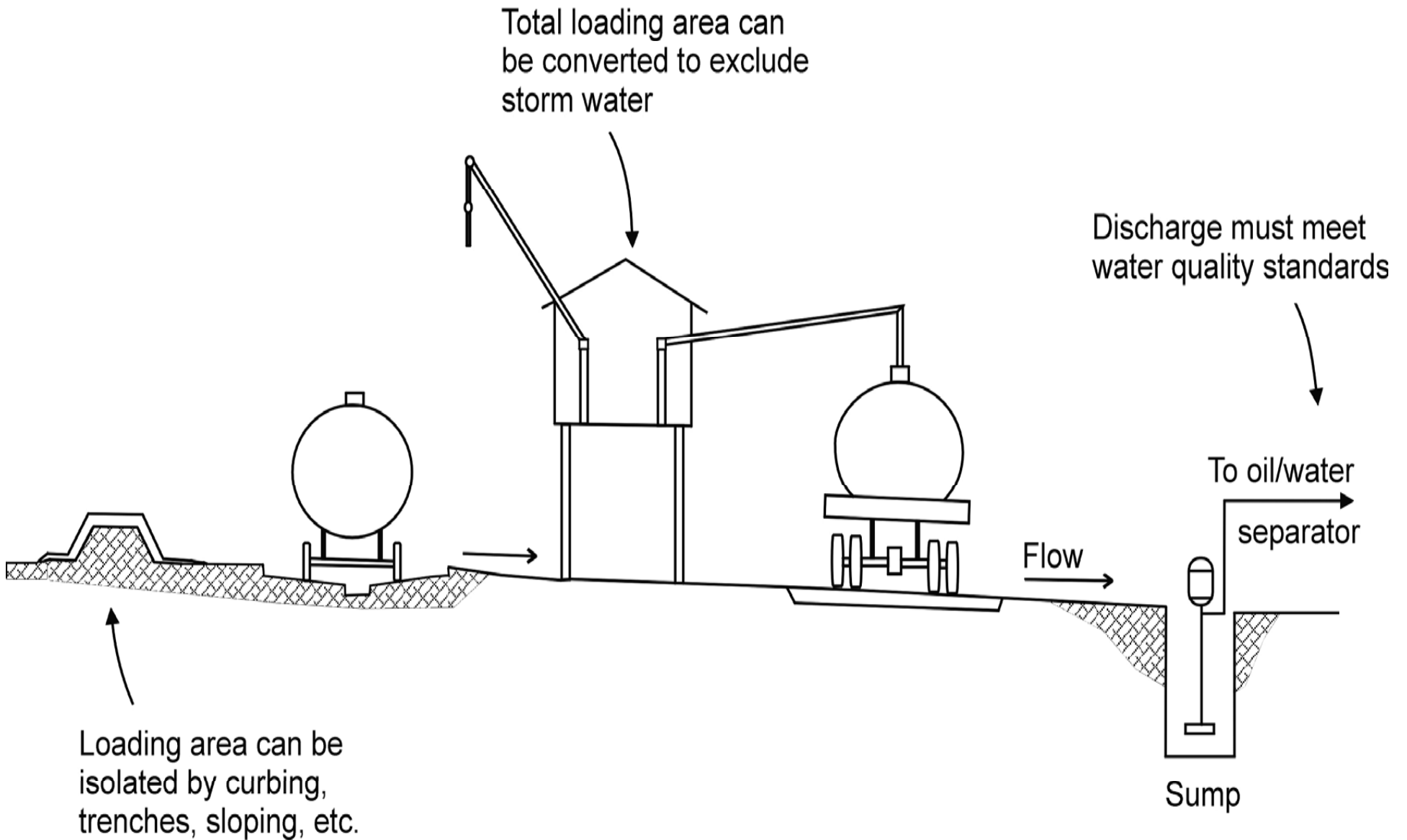
# Loading/Unloading Racks

- (1) Drainage must be directed into a catchment basin or treatment facility designed to handle discharges OR quick drainage system

Catchment must be designed to hold at **least the maximum capacity of the largest single compartment** of a tank car or tank truck loaded or unloaded at the facility.

- (2) Must have interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle brake interlock system to prevent vehicles from departing before complete disconnection oil transfer lines.
- (3) Must inspect for discharges the lowermost drain and all outlets of such vehicles, tighten or adjust as needed.

§ 112.7(h)

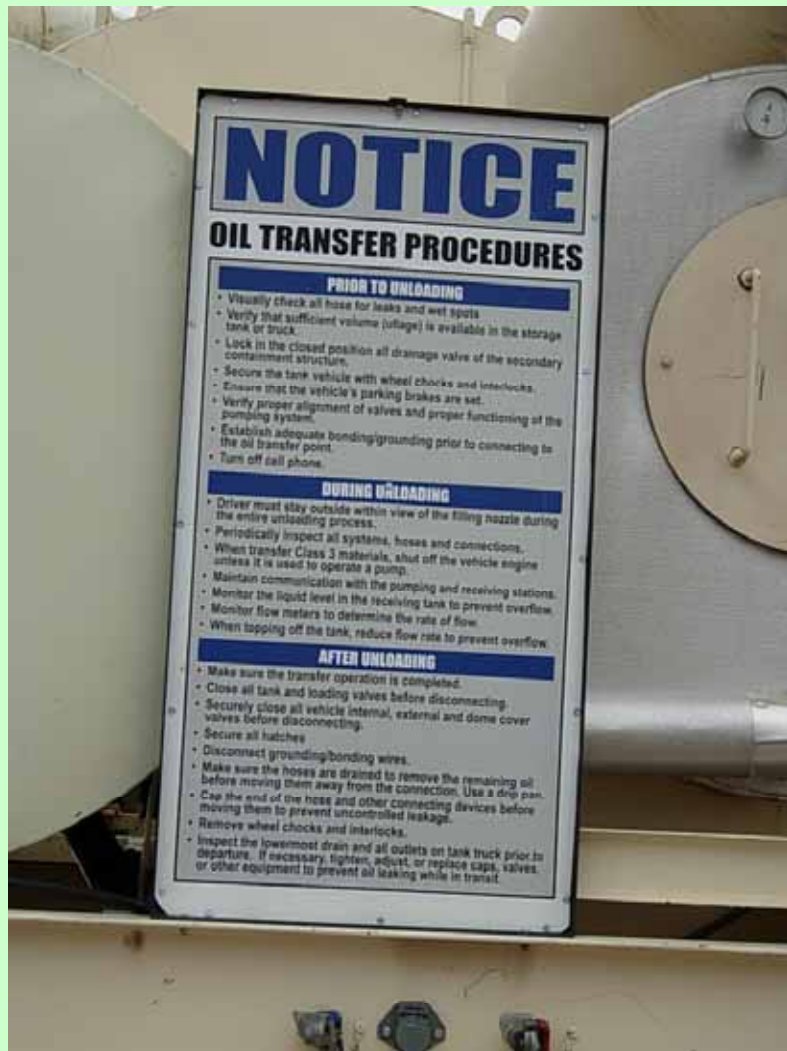






# Transfer Areas

- Areas where oil is transferred but no loading or unloading rack is present.
- Only §112.7(c) applies; secondary containment size should be based on the magnitude of a most likely discharge.
- Determination of adequate secondary containment should consider:
  - The reasonably expected sources and causes of a discharge;
  - The reasonably expected maximum rate of discharge;
  - The ability to detect and react to the discharge;
  - The reasonably expected duration of the discharge; and
  - The time it would take a discharge to impact navigable waters or adjoining shorelines.







# UST Oil Transfer Clarification

Transfer activities associated with an exempt UST, **at an otherwise regulated SPCC facility**, are covered and must be addressed in the SPCC Plan.

- If a transfer to or from an exempt UST occurs across a loading/unloading rack (as defined in the amended rule) then the facility must comply with 112.7(h).
- All other transfers/equipment (dispensers) must be addressed and meet the general secondary containment requirements 112.7(c).
- Dispensers and racks are not part of a UST system and therefore SPCC regulated.

# **Brittle Fracture or Other Catastrophe**

**If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.**

**§ 112.7(i)**



*Photos courtesy of  
NOAA Office of Response and Restoration, National Ocean Service*

# General SPCC Requirements

**In addition to the minimal prevention standards listed under this section, include in your plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in Part 112 or any applicable more stringent State rules, regulations, and guidelines.**

**§ 112.7(j)**

# Oil-filled Operational Equipment

- **Includes:**
  - An oil storage container in which the oil is present solely to support the function of the apparatus or the device
  - Examples: hydraulic systems, lubricating systems, gear boxes, machining coolant systems, heat transfer systems, transformers, other electrical equipment, and other systems containing oil to enable operation
- **Subject to the general SPCC requirements, including the secondary containment provision under §112.7(c)**

# Oil-filled Operational Equipment

- Alternative to the general secondary containment requirements for **qualified** oil-filled operational equipment:
  - prepare an oil spill contingency plan
  - Include a written commitment of manpower, equipment, and materials; and
  - have an inspection or monitoring program to detect equipment failure and/or a discharge
- Individual impracticability determination for each piece of equipment is not required.

# Oil-filled Operational Equipment

- **For the 3 years prior to plan certification, or since becoming subject to the rule if it has operated for less than 3 years, the facility must not have had:**
  - **A single discharge of oil from any oil-filled operational equipment to navigable waters exceeding 1,000 U.S. gallons, or**
  - **Two discharges of oil from any oil-filled operational equipment to navigable waters each exceeding 42 U.S. gallons within any 12-month period.**

*Eligibility determined by the reportable discharge history from the equipment, not the entire facility.*

§ 112.7(k)

# Oil-filled Operational Equipment Summary

If the facility...	And the equipment...	Then the owner/operator of the facility...
<b>...has oil-filled operational equipment</b>	<b>... has not had a single oil discharge to navigable waters exceeding 1,000 gallons or 2 discharges of oil to navigable waters each exceeding 42 gallons within any 12 month period for 3 years prior to the SPCC Plan certification date.</b>	<b>...may implement an inspection and monitoring program, develop an oil spill contingency plan, and provide a written commitment of resources to control and remove oil discharged, for qualified equipment in lieu of secondary containment for the oil-filled operational equipment</b> <b>...does not need to make an impracticability determination for each piece of equipment</b>





**QUESTIONS ????**

*Thank you!*