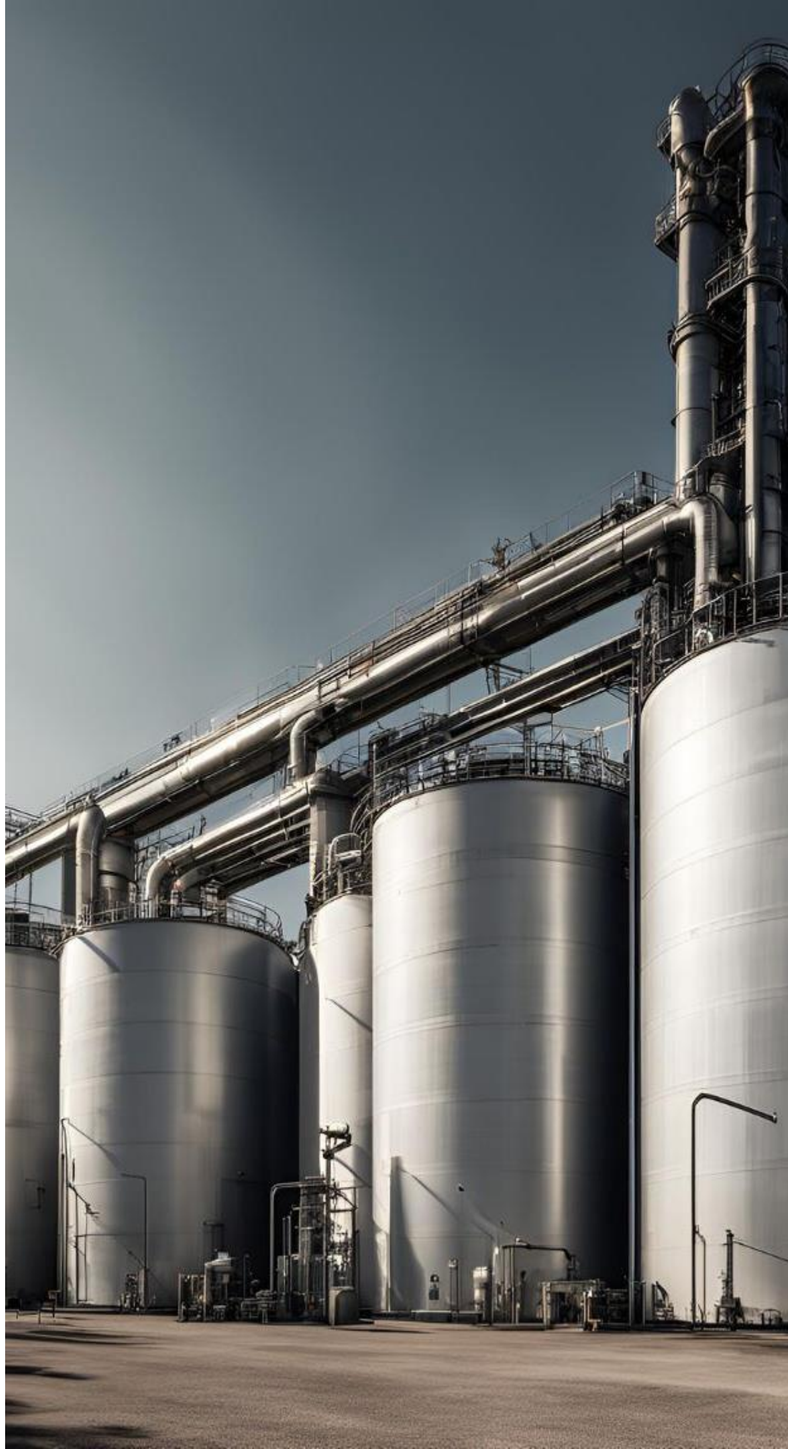
STORM WATER AWARENESS WEEK 2024

September 23-27

STORMWATERAWARENESS.ORG

Exploring SPCC Plans and Hazardous Waste Management in California

Overview of regulations and requirements

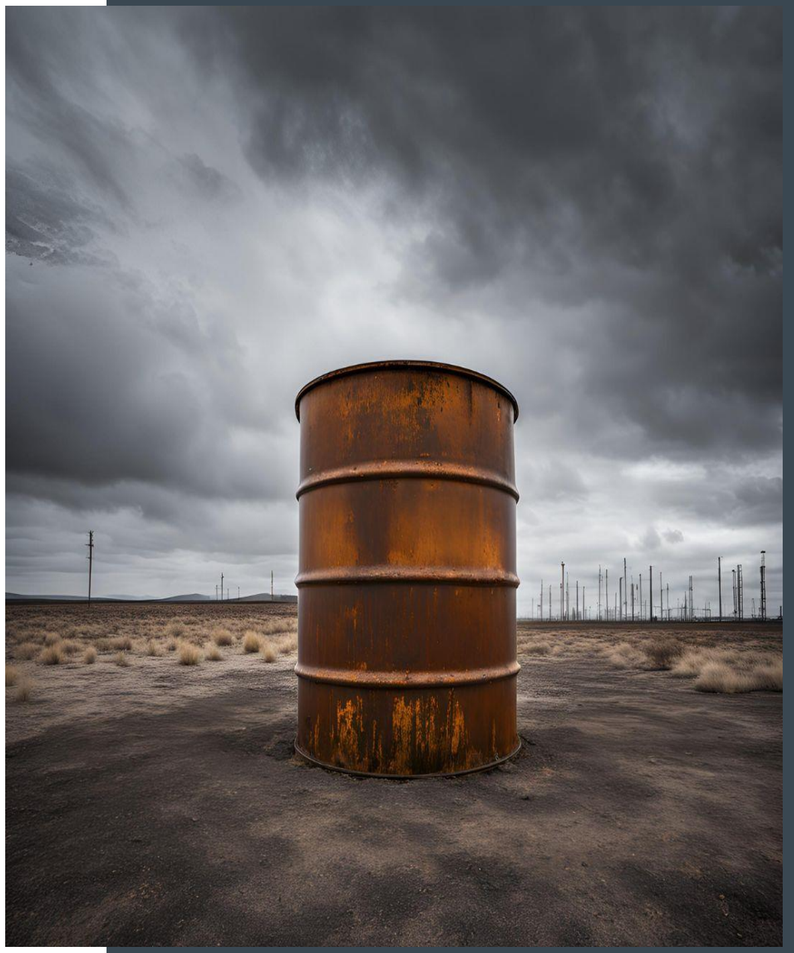


Road Map

Two Main Topics:

Spill Prevention Control and Countermeasures(SPCC) Plans

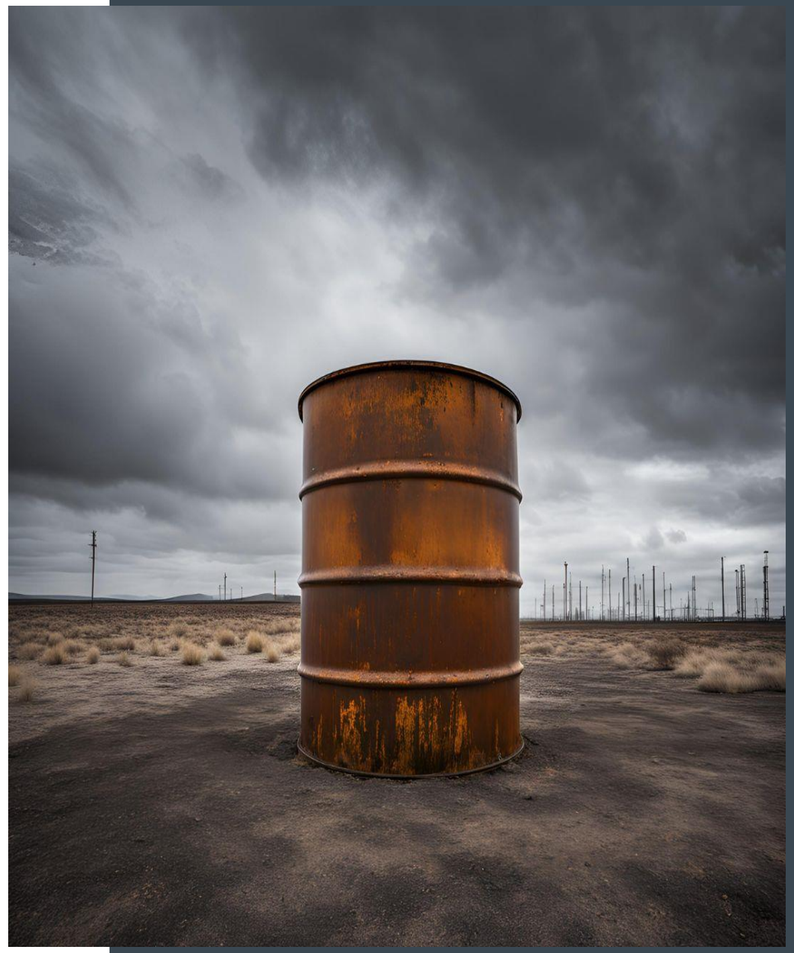
Basic Hazardous Waste Management



Road Map

Spill Prevention Control and Countermeasures Plans:

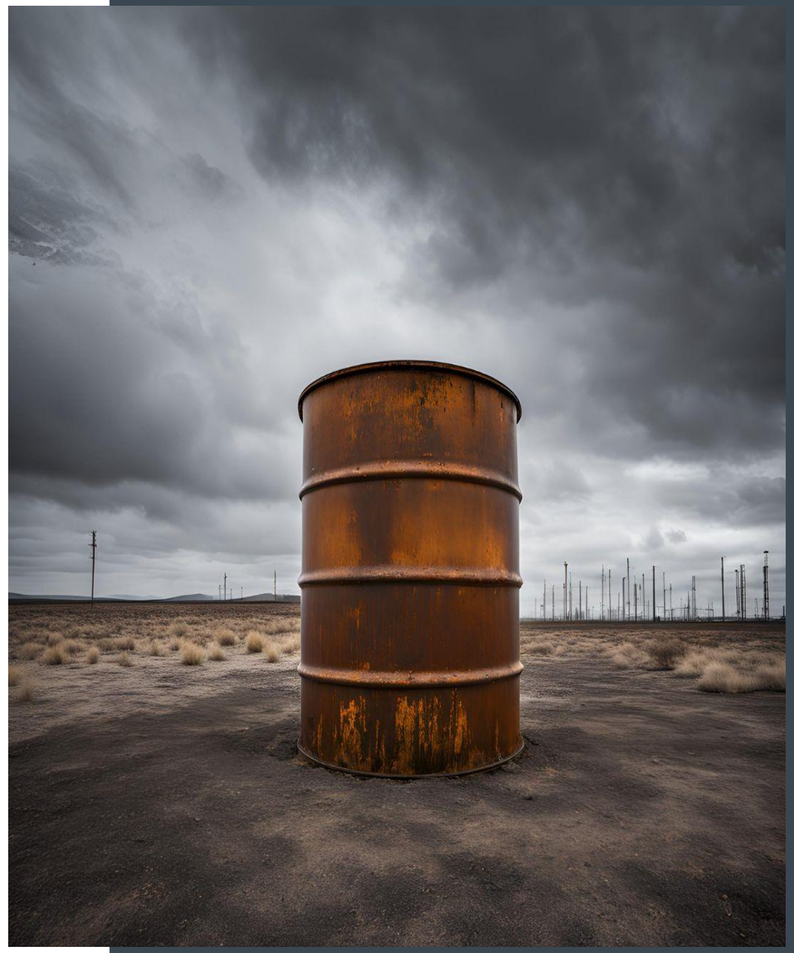
- Overview of SPCC Plans
- Who needs an SPCC Plan
- Different “Tiers” of SPCC Plans
- Key components of an SPCC Plan



Road Map

Basic Hazardous Waste Management in California:

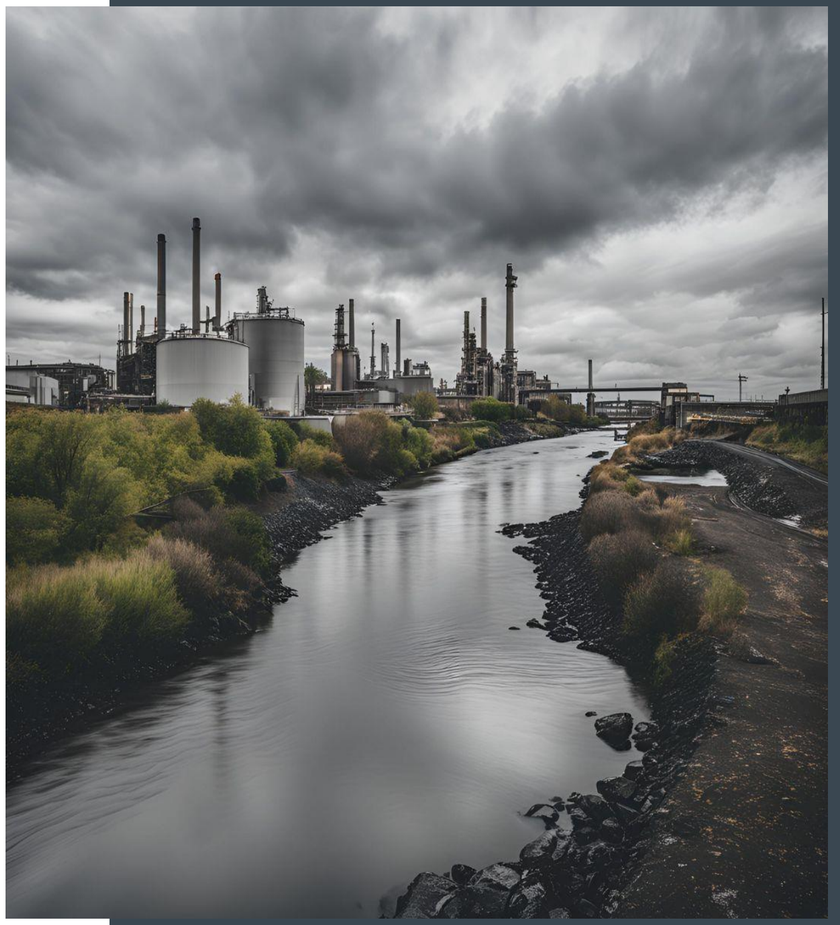
- Overview of Hazardous Waste Regulations
- Managing Hazardous Waste
- Common Violations and how to avoid them

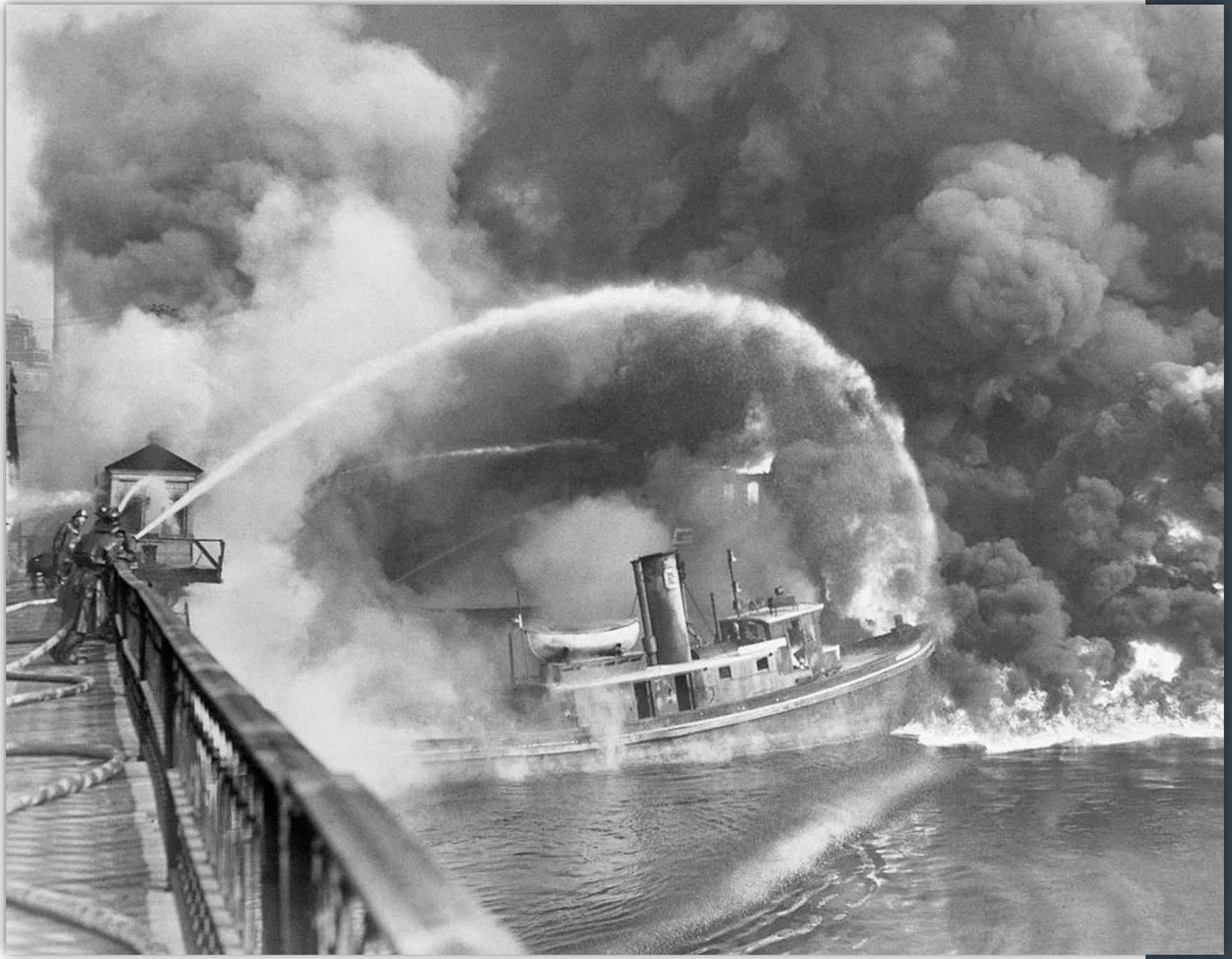


Regulatory Background of SPCC Plans

What major event lead to the clean water act?

The 1969 Cuyahoga River

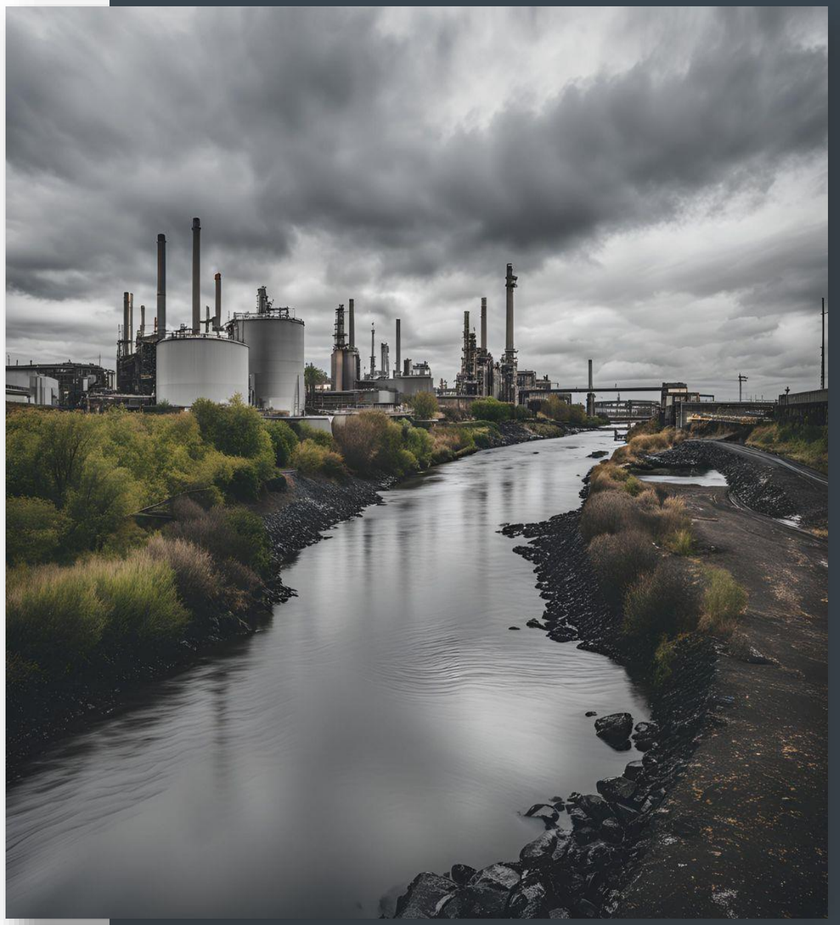




Regulatory Background of SPCC Plans

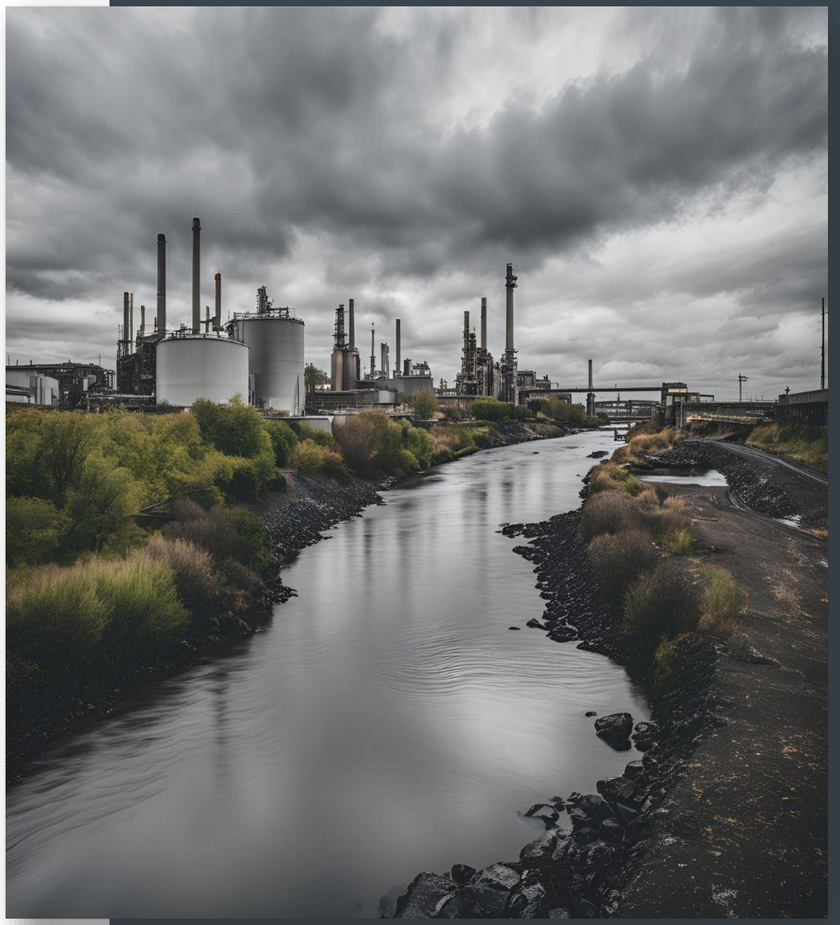
A 4,000,000-gallon oil spill for an aboveground storage tank (AST) which discharged into the Monongahela river near Floreffe, Pennsylvania

An 11,000,000-gallon oil discharge into the Prince William Sound



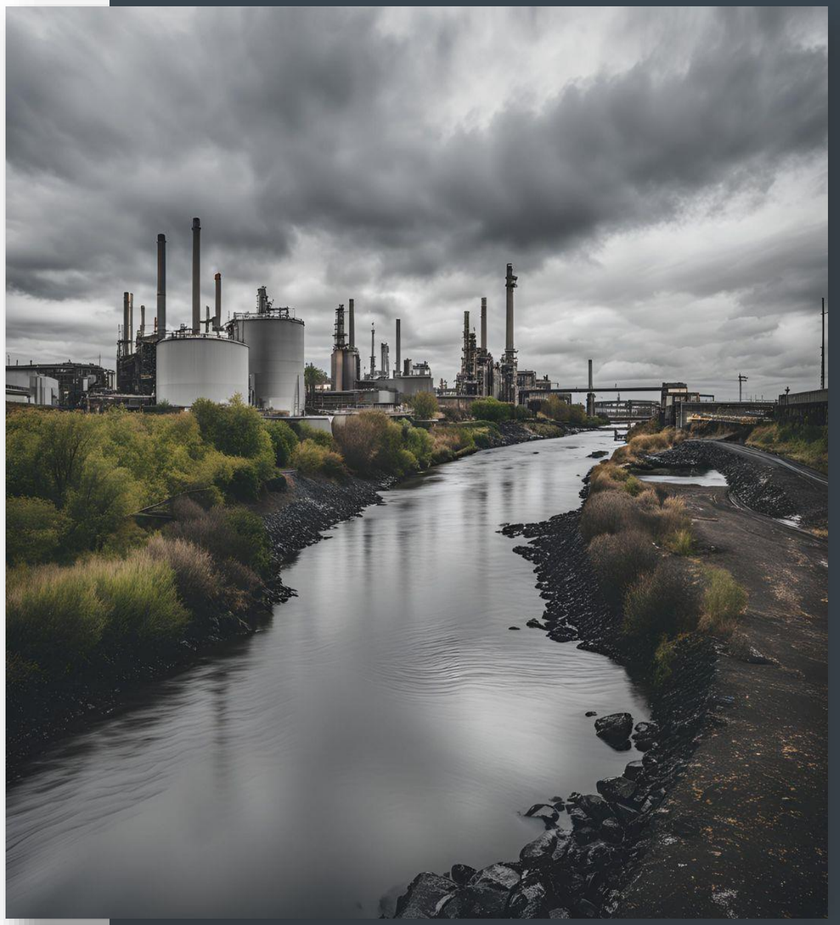
Regulatory Background of SPCC Plans

The federal Clean Water Act authorized the oil pollution prevention regulations. The United States Environmental Protection Agency (USEPA) established the Oil Pollution Prevention regulations under Title 40, Code of Federal Regulations (CFR), Part 112. These regulations apply to non-transportation facilities that could reasonably be expected to discharge oil into or upon the navigable waters of the United States and have a total aboveground oil storage capacity of over 1,320 gallons, or a total underground oil storage capacity of over 42,000 gallons.



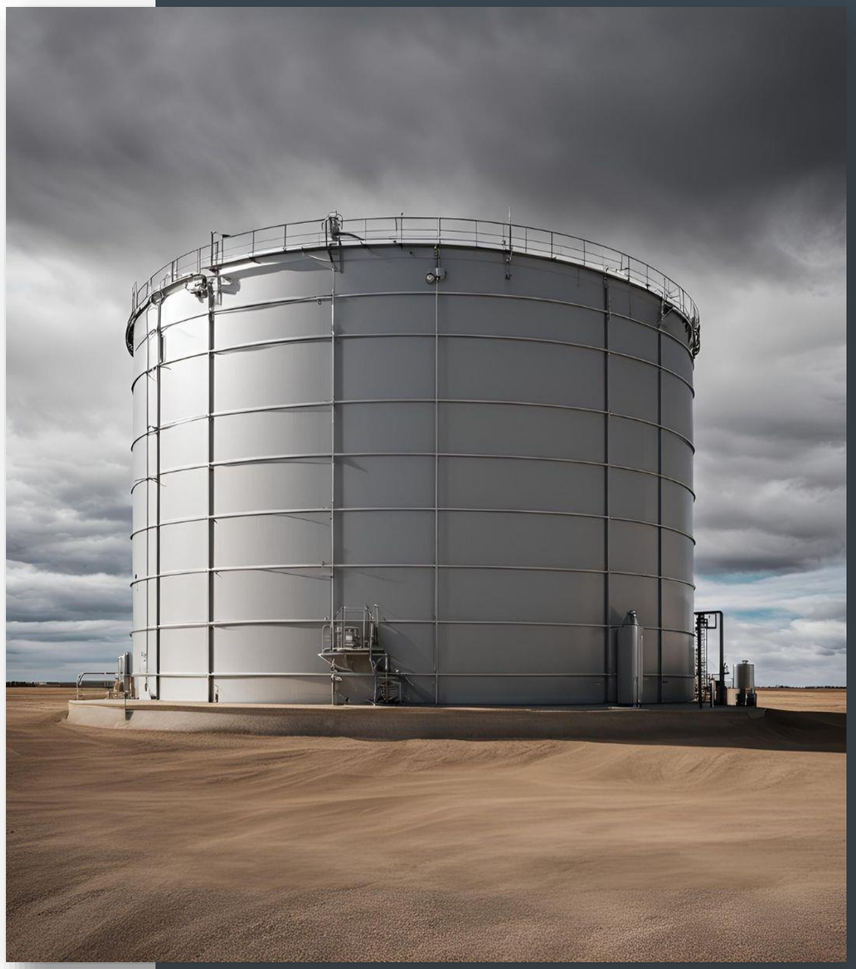
Regulatory Background of SPCC Plans

Oil is defined by the regulations as “oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.” The State of California Aboveground Petroleum Storage Act also requires transportation-related facilities to prepare and implement a SPCC Plan.



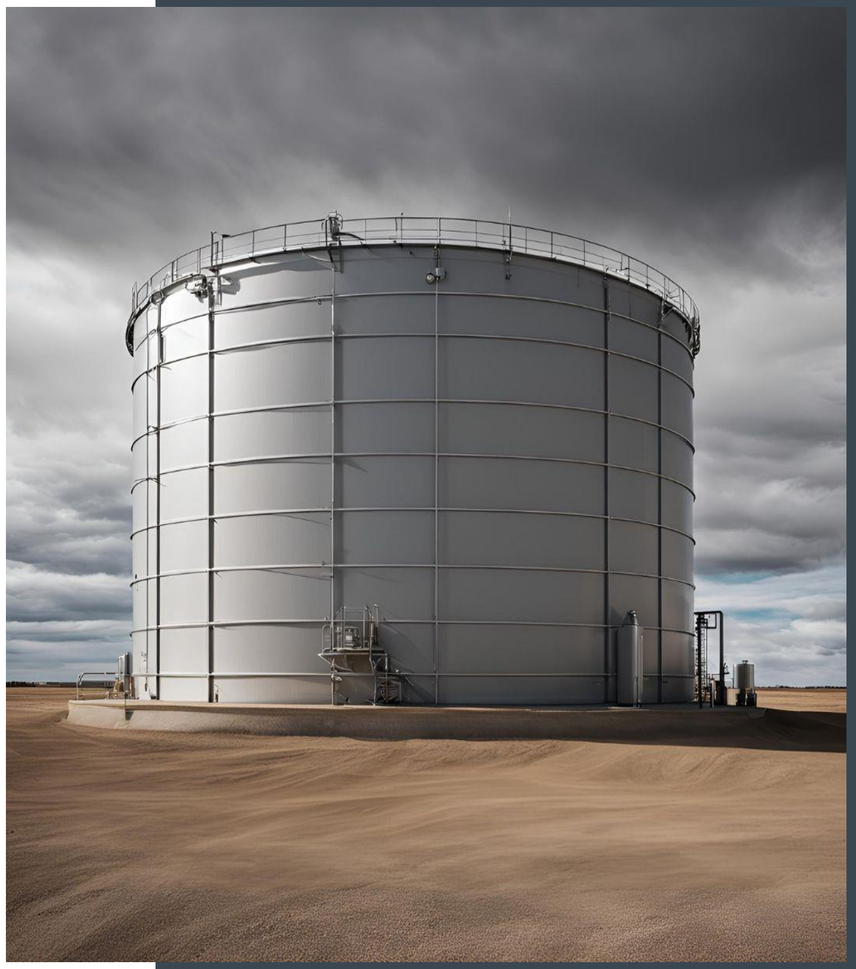
Overview of SPCC Plans

- SPCC Plans are designed to prevent oil discharges into navigable waters or adjoining shorelines
- SPCC plans must be devolved accordance to 40 CFR Part 112
- There are three different “tiers” of SPCC plans



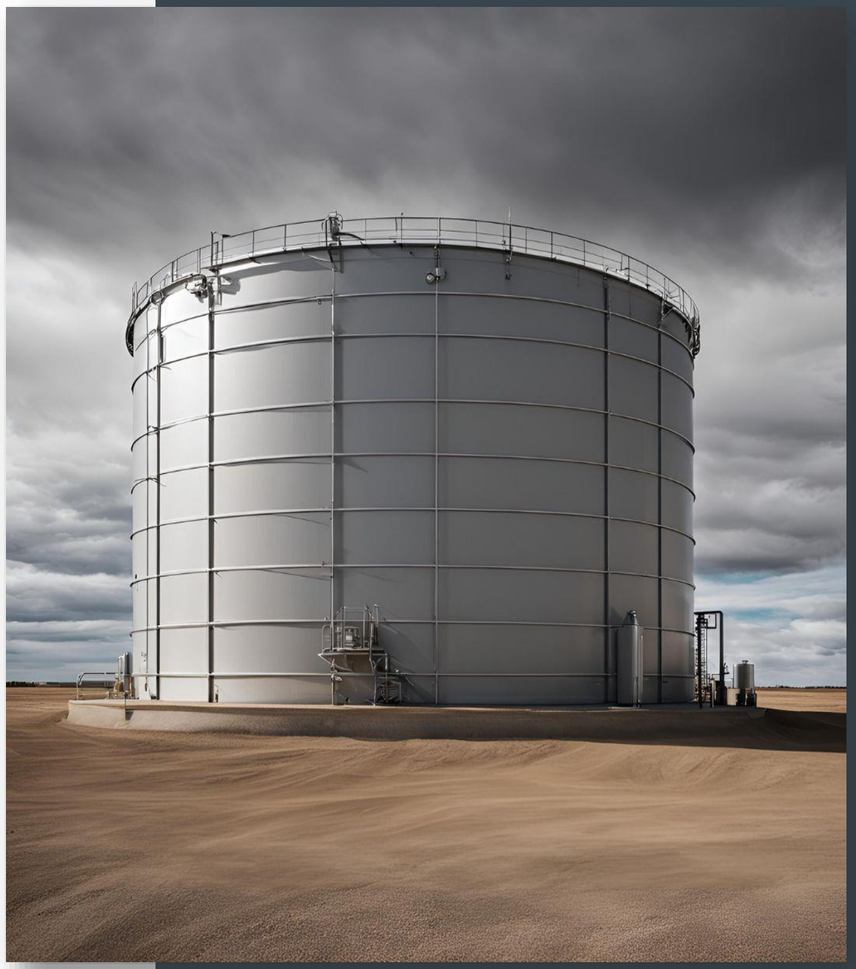
Overview of SPCC Plans

- Who enforces the 40 CFR Part 112?
  - The United States Environmental Protection Agency (EPA)
  - Your local count Environmental Health Department (EHD) or Certified Unified Program Agency (CUPA)
  - Local Fire Department



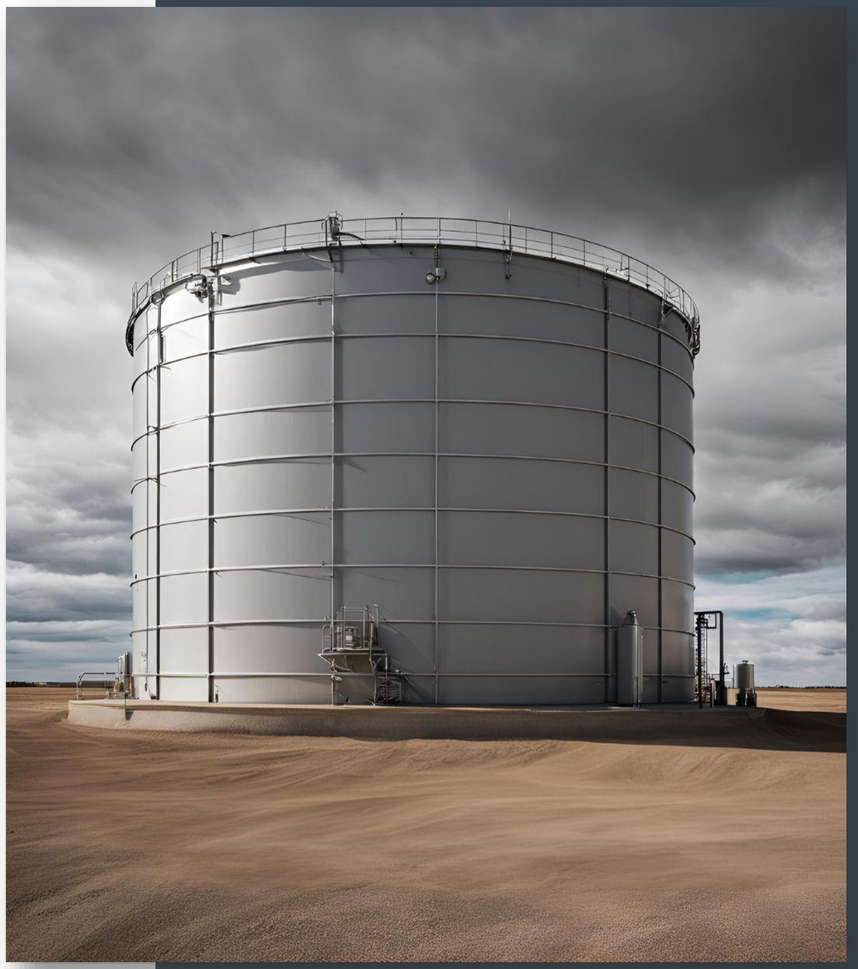
Who needs an SPCC Plan?

- A facility that stores, processes, refines, uses or consumes oil in a non-transportation related activity
- Your facility can be reasonably expected to discharge oil in quantities that may be harmful into navigable waters or adjoining shorelines

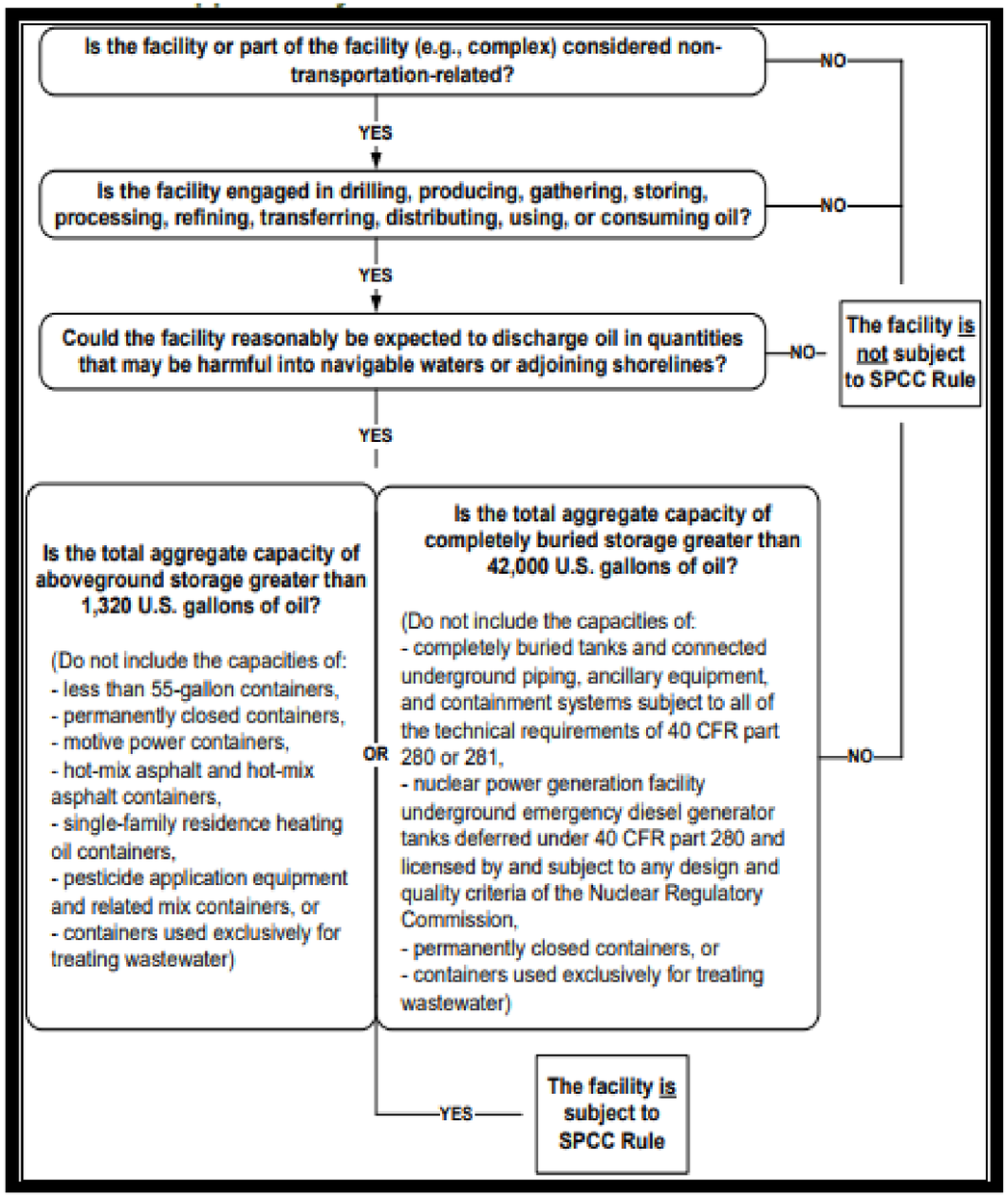


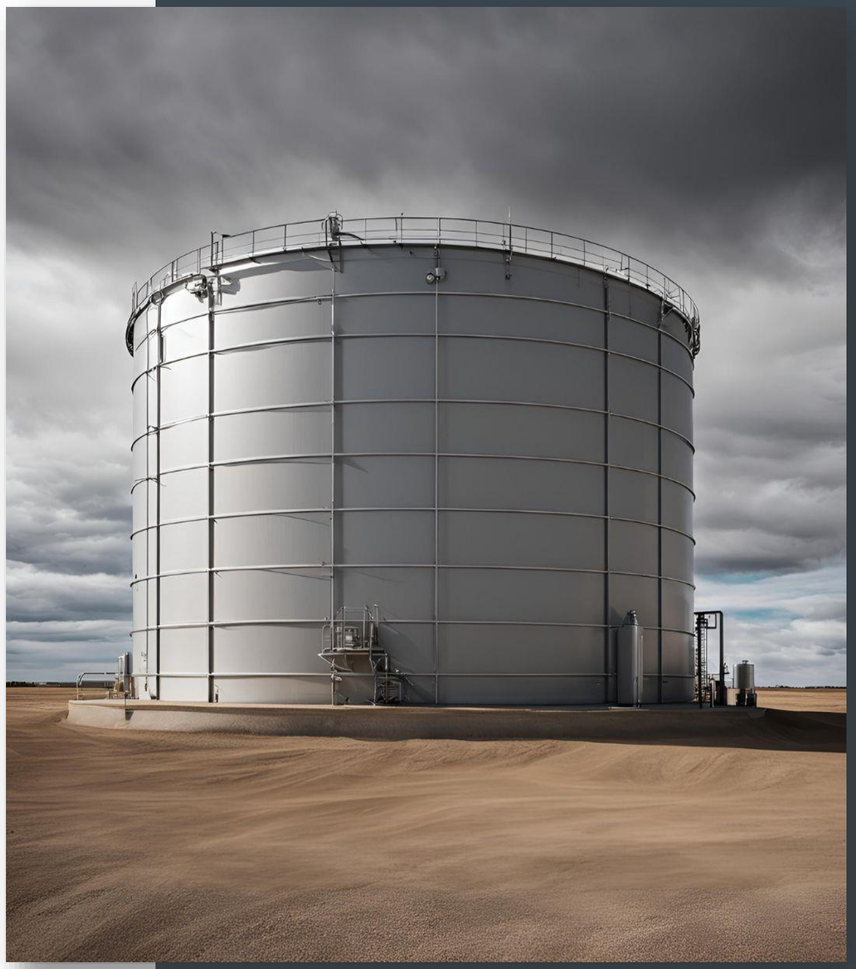
Who Needs an SPCC Plan?

- Has a total aboveground storage capacity of 1,320 U.S. gallons of oil or greater OR a total buried storage of 42,000 U.S. gallons of oil
  - The total quantity of oil/petroleum-based product storage does not consider capacities of less than 55-gallon containers
  - Permanently closed containers
  - Single-family residence heating oil containers
  - Pesticide application equipment and related mix containers



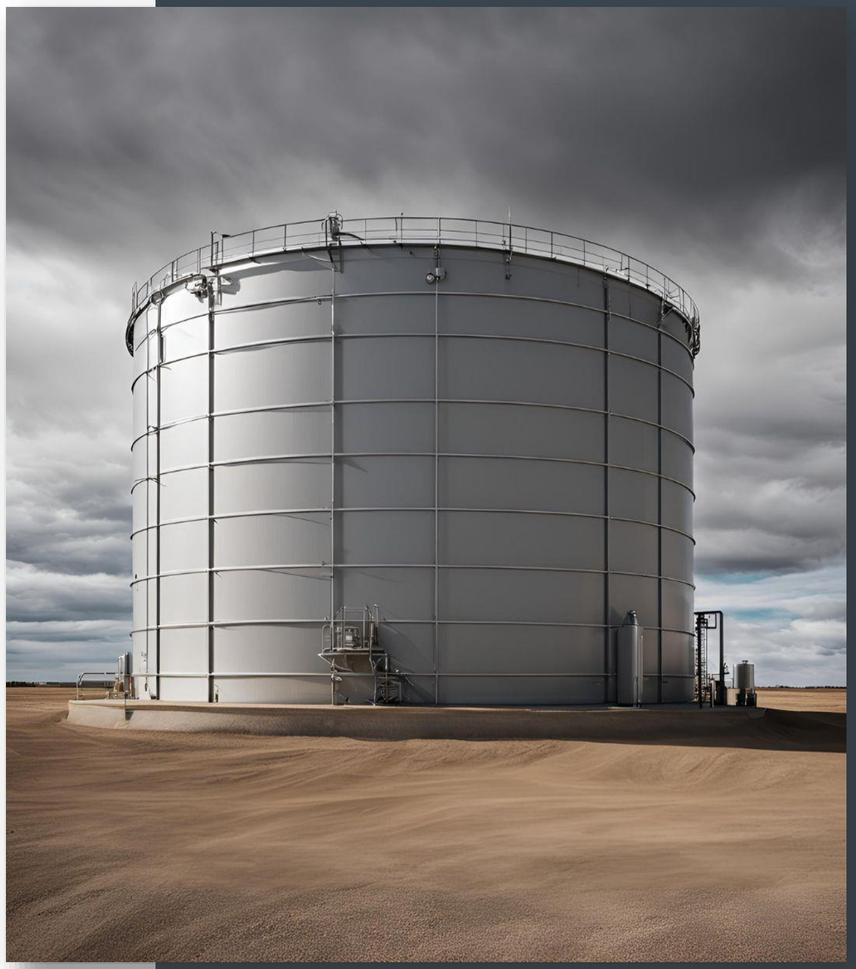
Who Needs an SPCC Plan?





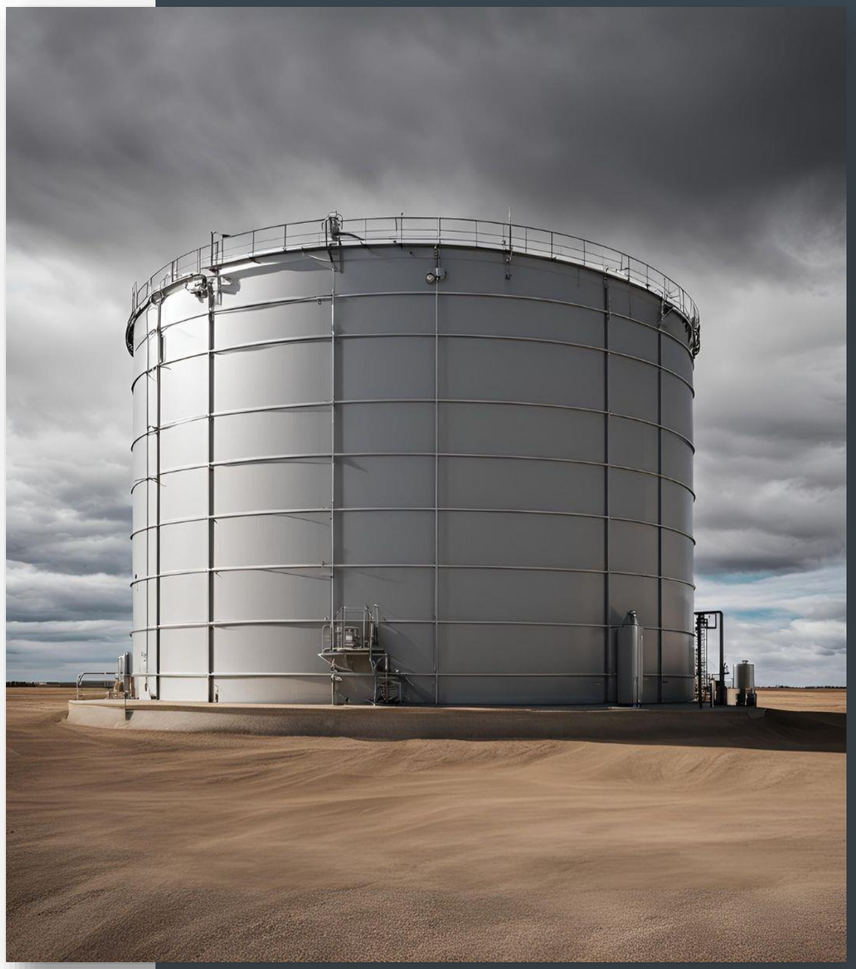
Who Needs an SPCC Plan?

- Tier I SPCC Plans:
  - Over 1,320-gallons of an oil/petroleum-based product
  - Less than 10,000-gallons of total storage capacity onsite
  - No tank over 5,000-gallons in size
- Tier II SPCC Plans:
  - Over 1,320-gallons, less than
  - 10,000-gallon total storage capacity onsite
  - At least one tank over 5,000 gallons



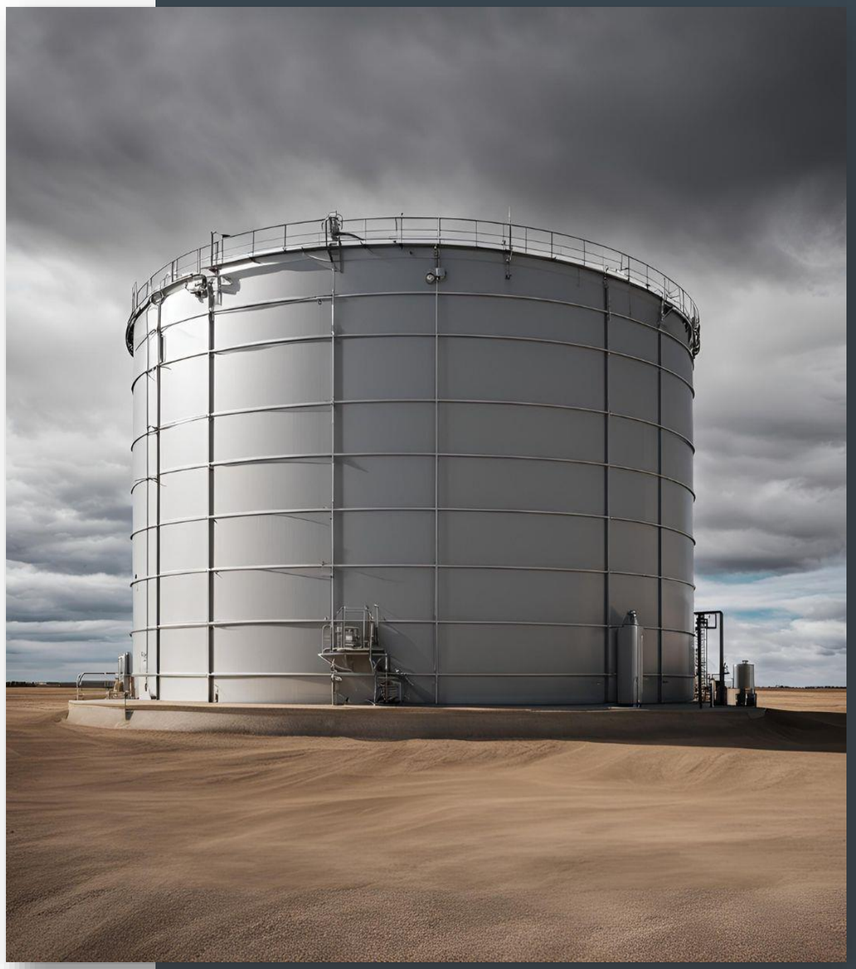
Who Needs an SPCC Plan?

- Tier III Or Professional Engineer (PE) Certified plan
  - Over 10,000-gallons of total storage capacity
  - At least one tank over 5,000 gallons in size
  - A single discharge of oil to navigable waters or adjoining shorelines exceeding 1,000 gallons, or;
  - Two discharges of oil to navigable waters or adjoining shorelines each exceeding 42 gallons within any 12-month period



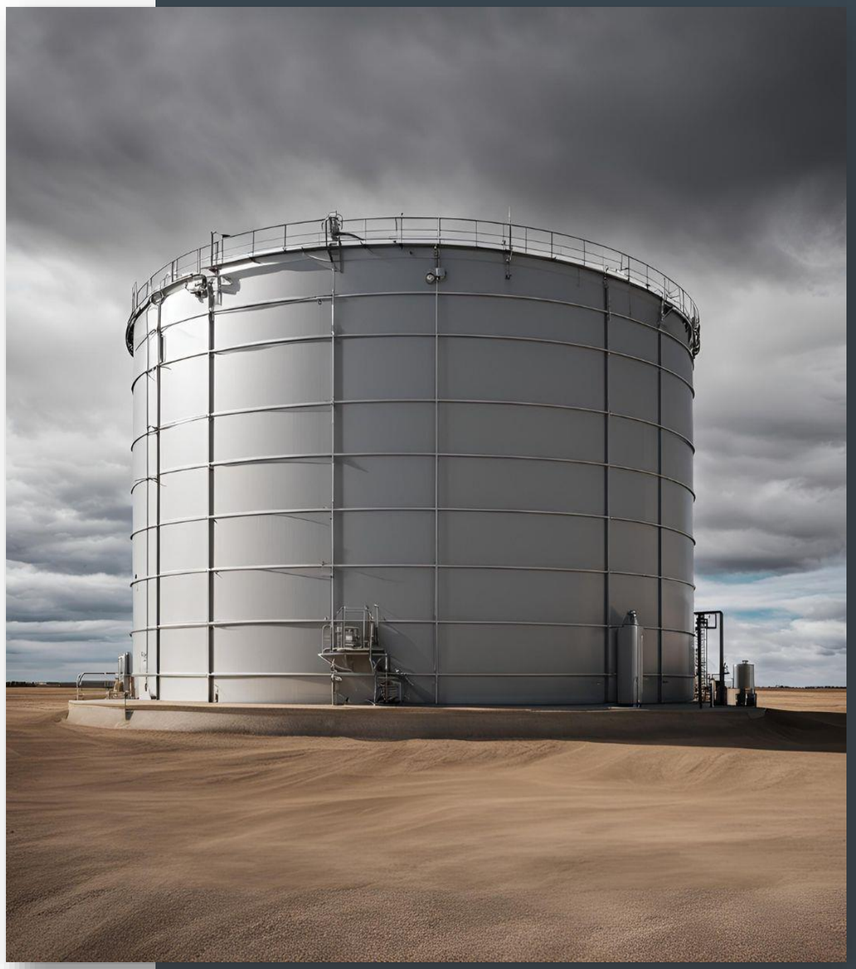
Who needs an SPCC Plan?

- In my experience facilities that I've written SPCC plans for are:
  - Agriculture
  - Logistic
  - Gas storage
  - Maintenance Yards
  - Landscaping Material Storage
  - Concrete Batch Plants
  - Active Construction Sites



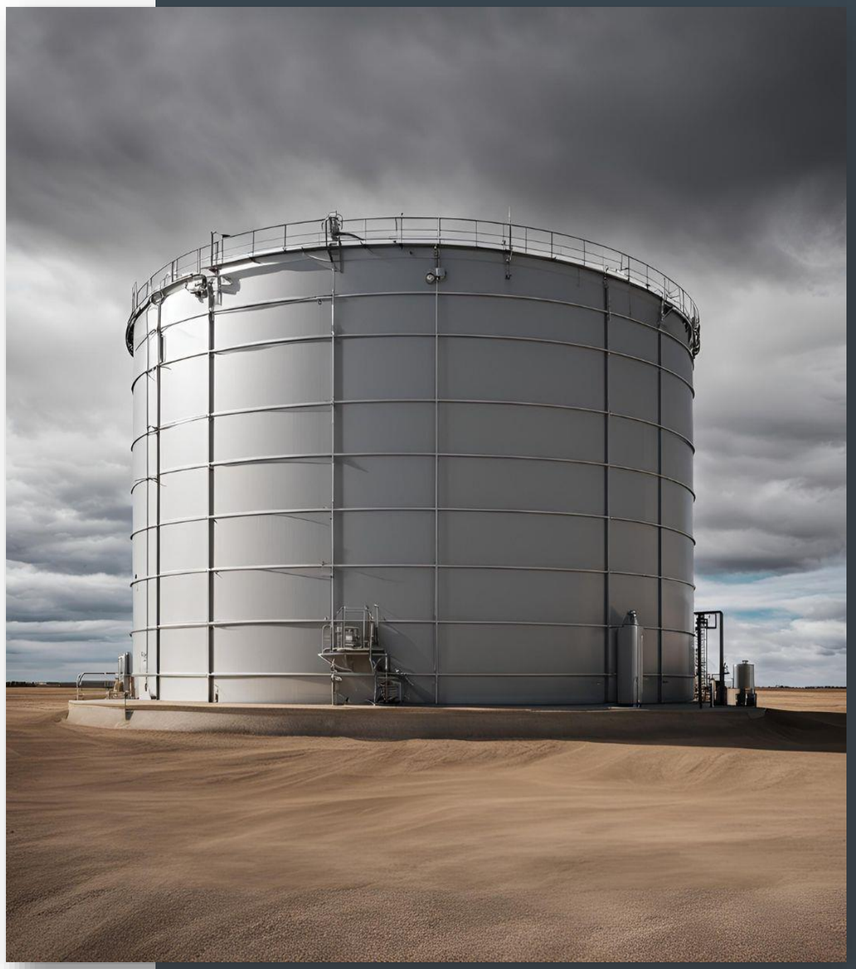
Key Components of an SPCC Plan

- Facility description
- Facility diagram
- Oil stage information
- Spill scenarios (worst-case)
- Secondary containment measures
- Spill prevention controls
- Training and spill response procedures
- Recordkeeping and inspection procedures
- Security Measures



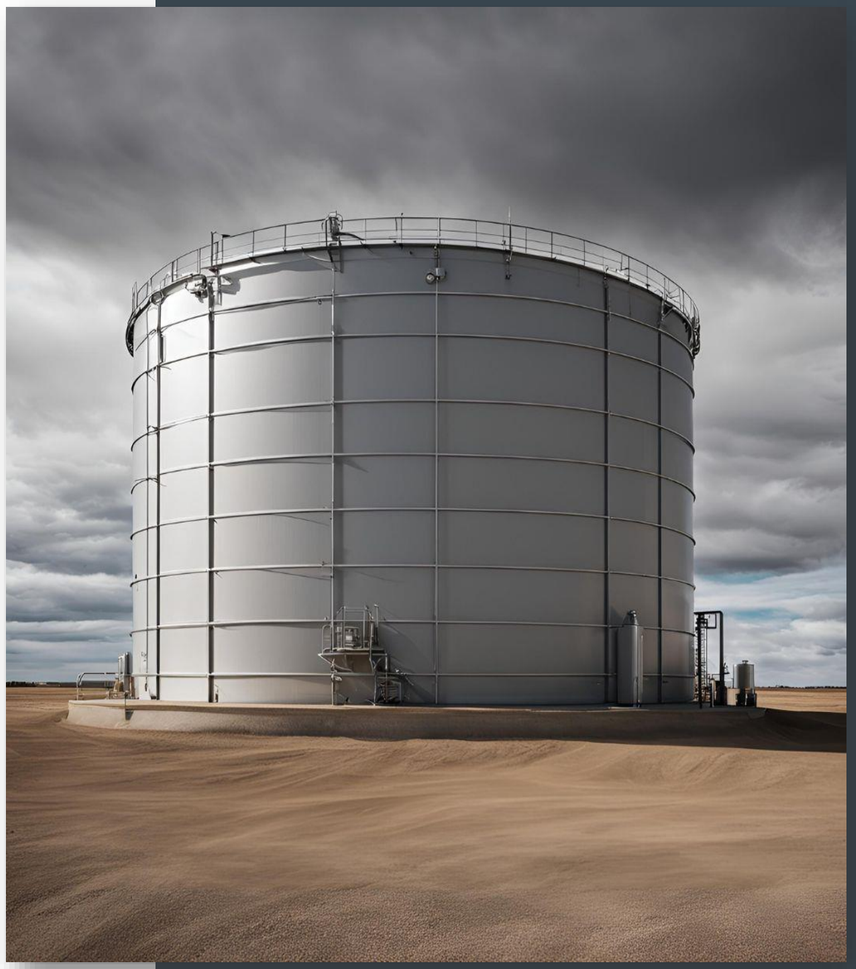
Key Components of an SPCC Plan

- 40 CFR Part 112.7 “If you are the owner or operator of a facility subject to this part you must prepare a Plan in accordance with good engineering practices. The Plan must have the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. You must prepare the Plan in writing.”

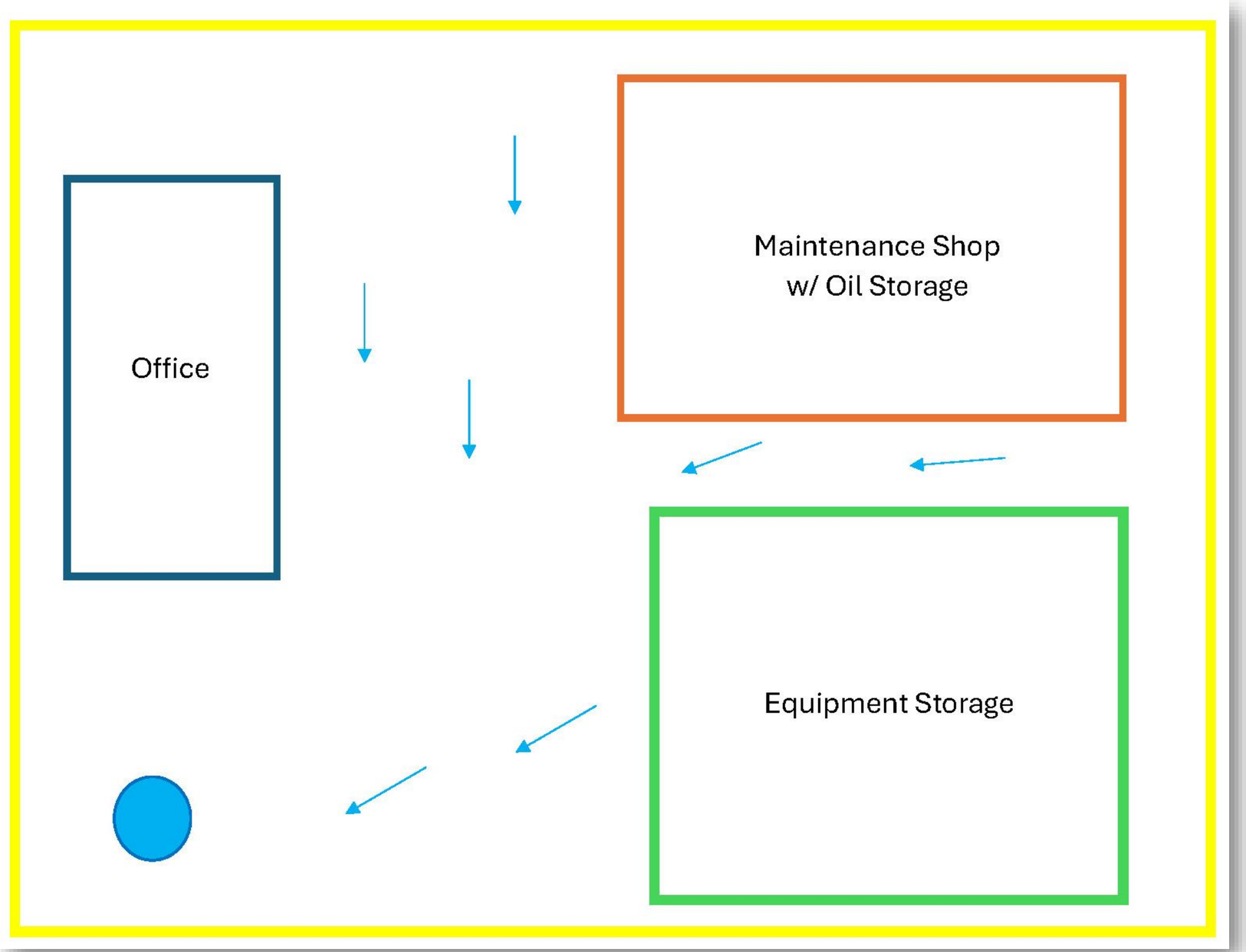


Key Components of an SPCC Plan

- 40 CFR 112.7(a)(1) “Include a discussion of your facility's conformance with the requirements listed in this part.”
- 40 CFR Part 112.7(a)(2) “Comply with all applicable requirements listed in this part…you must state the reasons for nonconformance in your Plan and describe in detail alternate methods and how you will achieve equivalent environmental protection.”

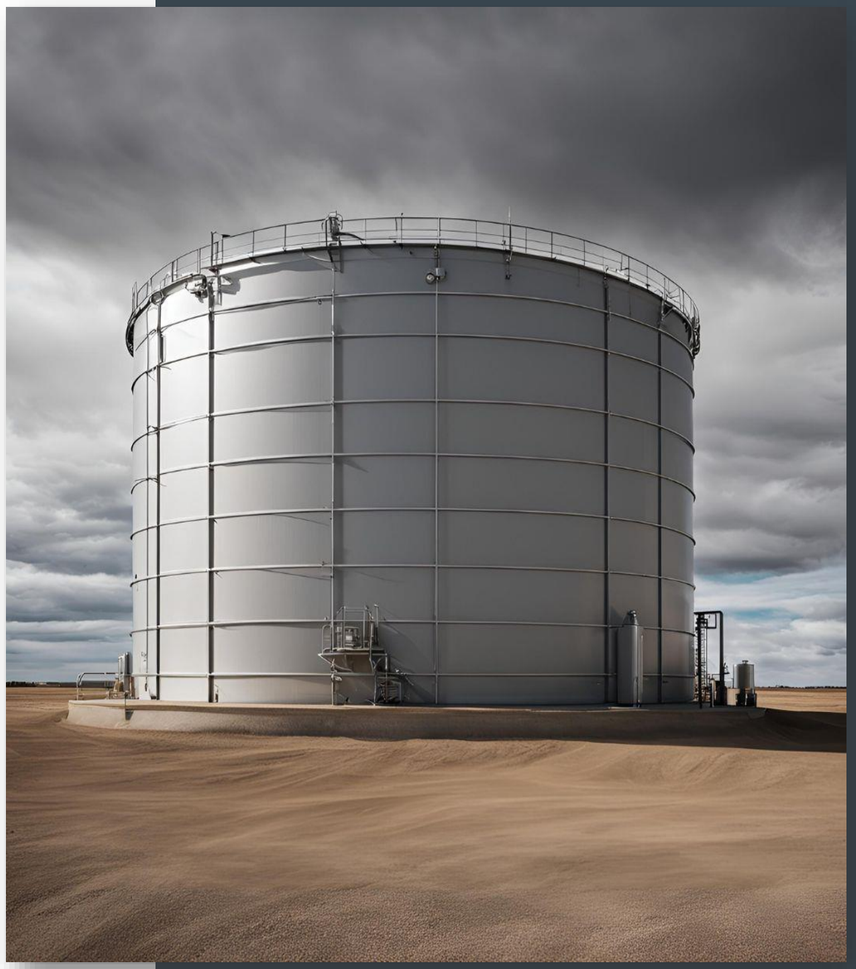


Key Components of an SPCC Plan



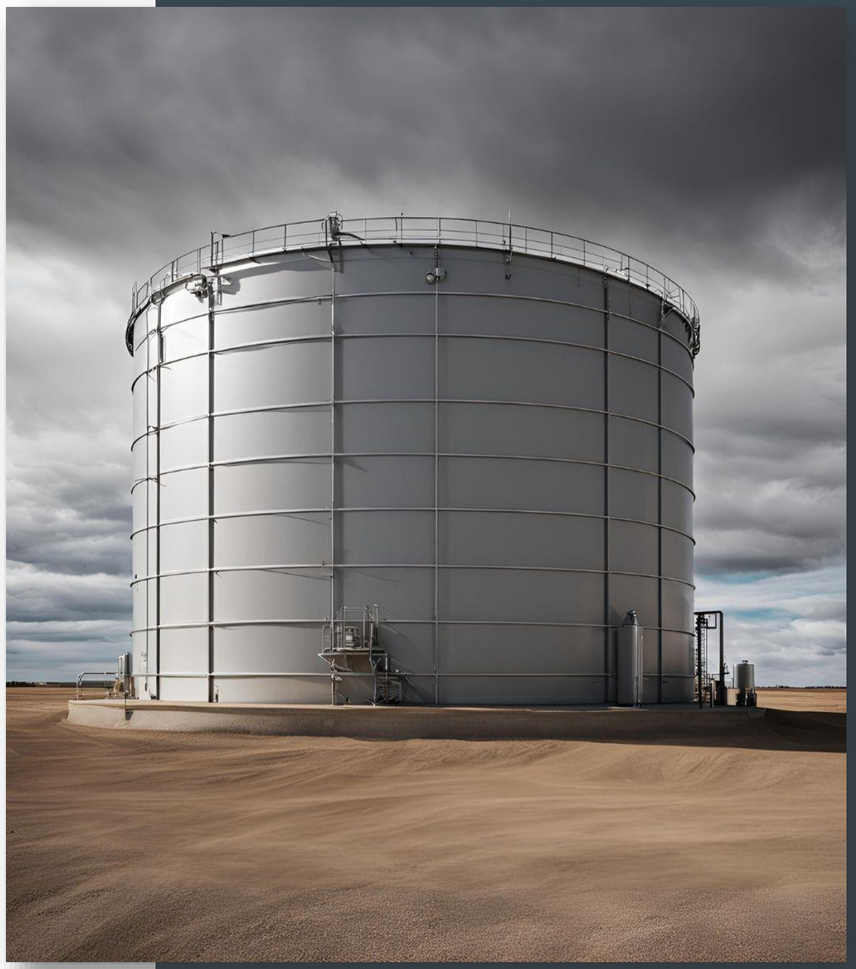
Key Components of an SPCC Plan

- 40 CFR 112.7(a)(3) “Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each fixed oil storage container and the storage area where mobile or portable containers are located…The facility diagram must also include all transfer stations and connecting pipes”



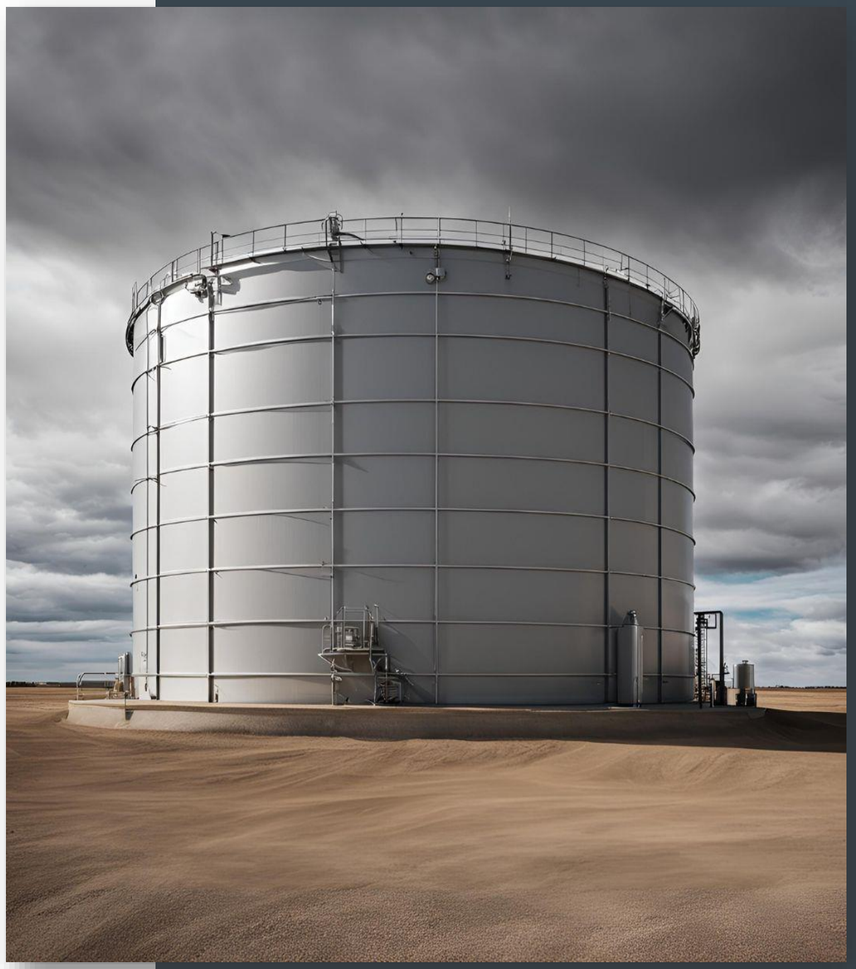
Key Components of an SPCC Plan

- 40 CFR 112.7(b)“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 a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.”



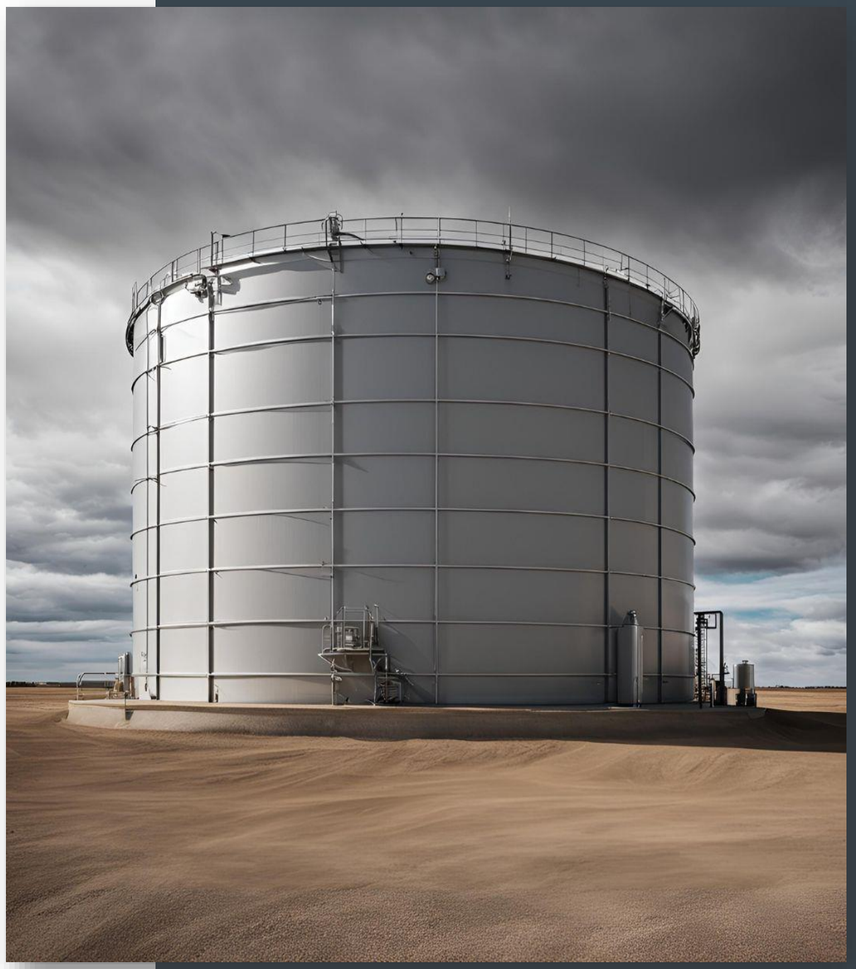
Key Components of an SPCC Plan

- 40 CFR 112.7(c)“Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge…the entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank, will not escape the containment system before cleanup occurs.”



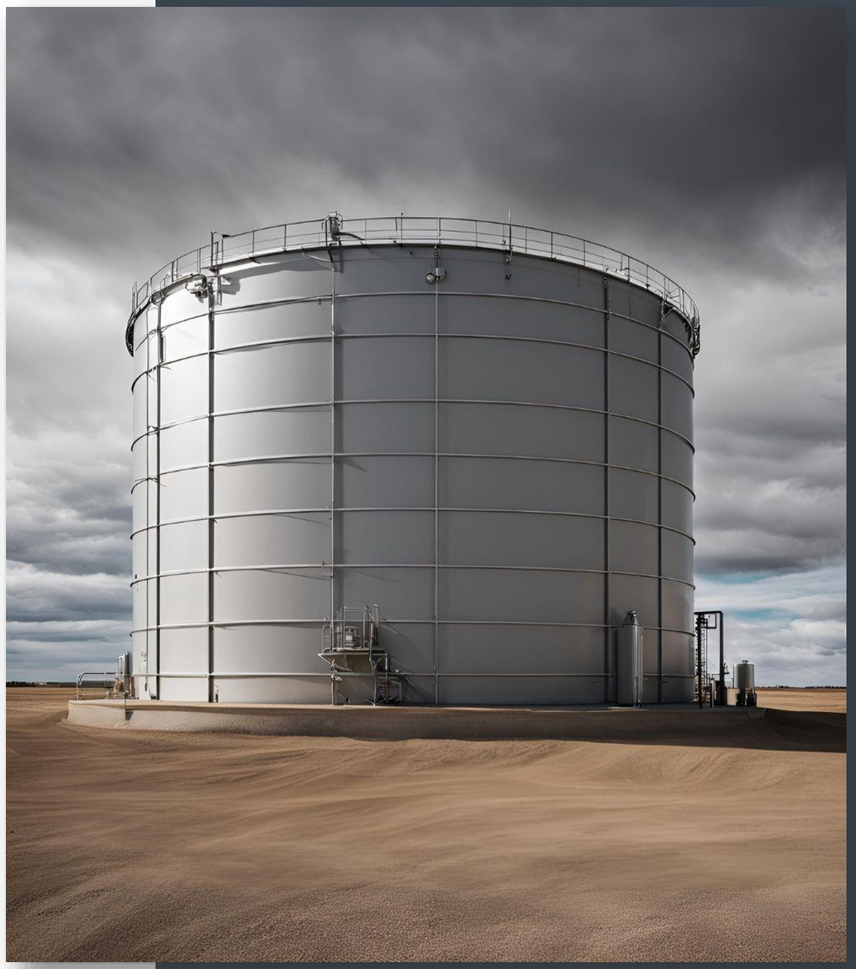
Key Components of an SPCC Plan

- 40 CFR 112.7(e) “Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must 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.”
- API 653 (Field Erected)
- STI SP001 (Shop-Built)



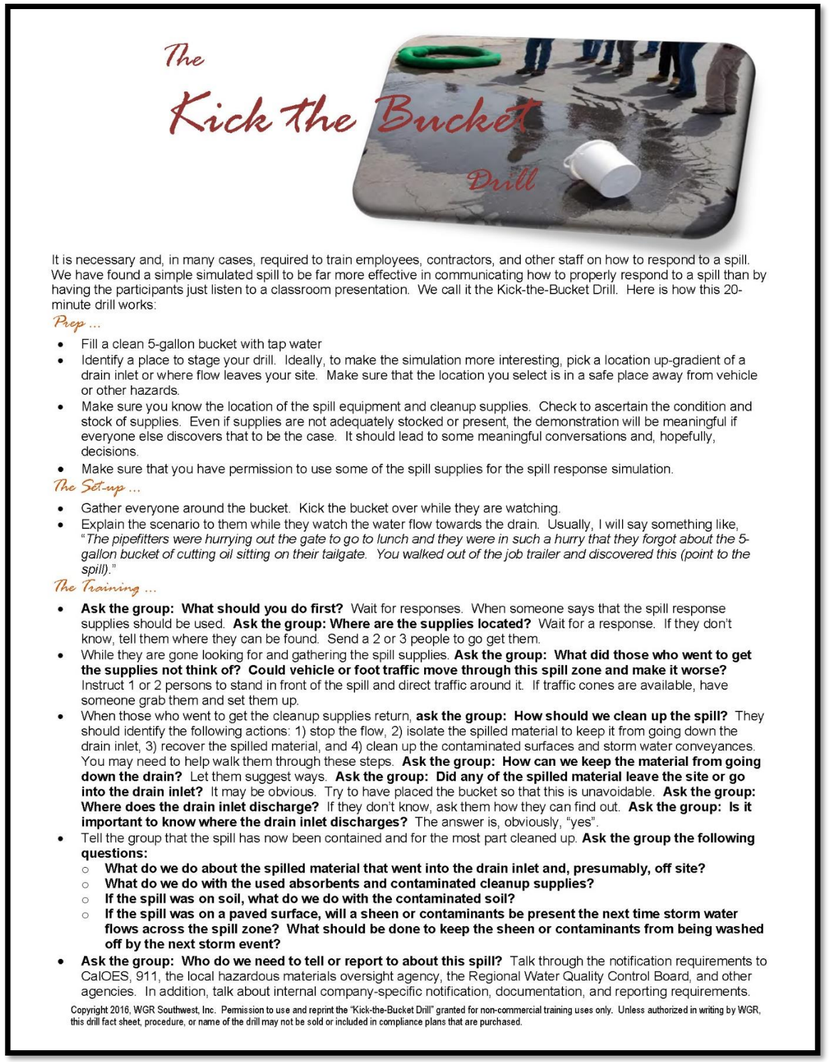
Key Components of an SPCC Plan

- 40 CFR 112.7(f)(1) “At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.”



Key Components of an SPCC Plan

- Kick the Bucket Drill



The Kick the Bucket Drill

It is necessary and, in many cases, required to train employees, contractors, and other staff on how to respond to a spill. We have found a simple simulated spill to be far more effective in communicating how to properly respond to a spill than by having the participants just listen to a classroom presentation. We call it the Kick-the-Bucket Drill. Here is how this 20-minute drill works:

Prep …

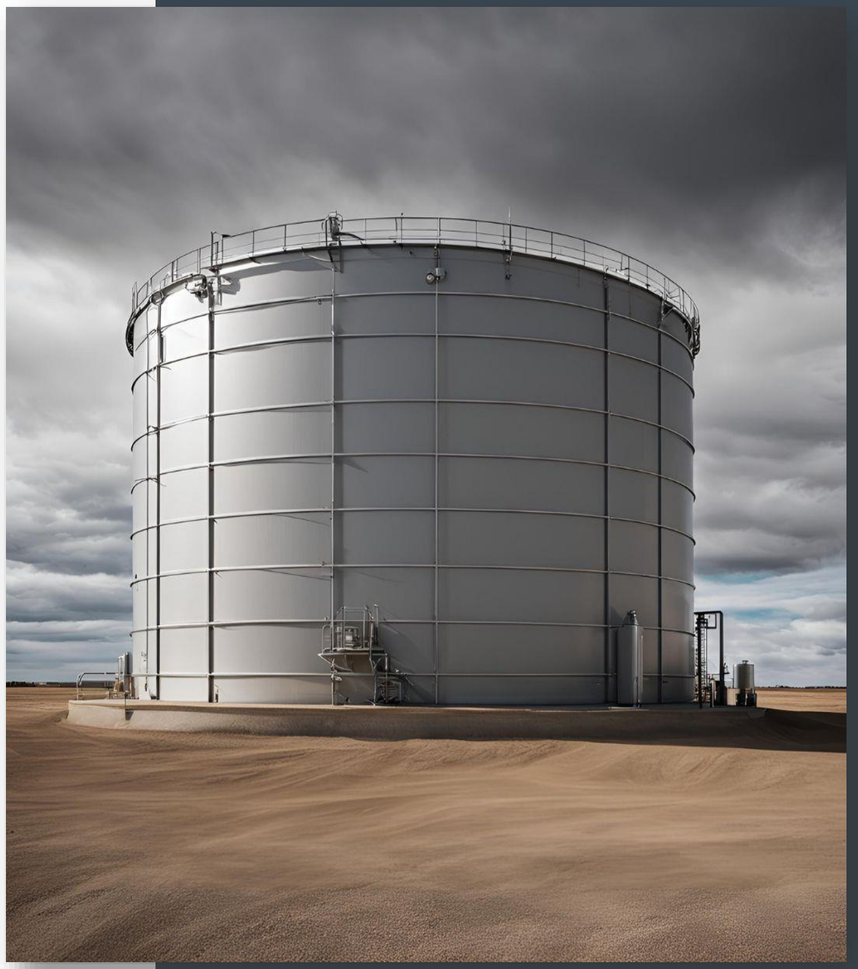
- Fill a clean 5-gallon bucket with tap water
- Identify a place to stage your drill. Ideally, to make the simulation more interesting, pick a location up-gradient of a drain inlet or where flow leaves your site. Make sure that the location you select is in a safe place away from vehicle or other hazards.
- Make sure you know the location of the spill equipment and cleanup supplies. Check to ascertain the condition and stock of supplies. Even if supplies are not adequately stocked or present, the demonstration will be meaningful if everyone else discovers that to be the case. It should lead to some meaningful conversations and, hopefully, decisions.
- Make sure that you have permission to use some of the spill supplies for the spill response simulation.

The Set-up …

- Gather everyone around the bucket. Kick the bucket over while they are watching.
- Explain the scenario to them while they watch the water flow towards the drain. Usually, I will say something like, "*The pipefitters were hurrying out the gate to go to lunch and they were in such a hurry that they forgot about the 5-gallon bucket of cutting oil sitting on their tailgate. You walked out of the job trailer and discovered this (point to the spill).*"

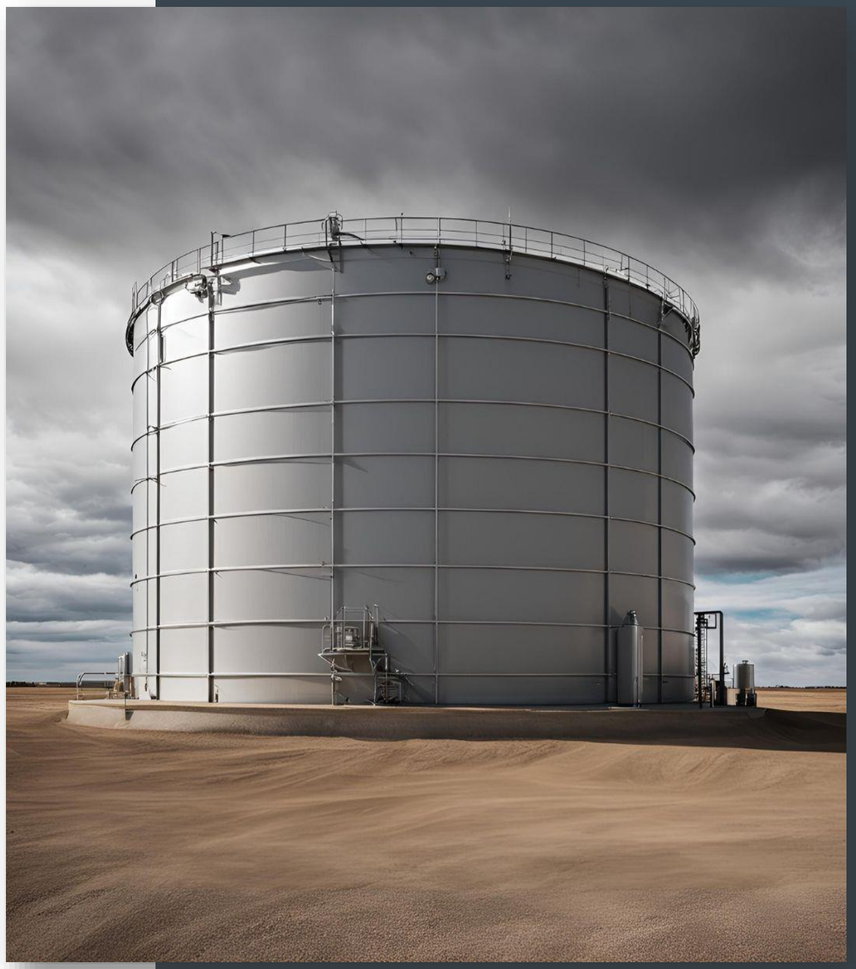
The Training …

- **Ask the group: What should you do first?** Wait for responses. When someone says that the spill response supplies should be used. **Ask the group: Where are the supplies located?** Wait for a response. If they don't know, tell them where they can be found. Send a 2 or 3 people to go get them.
- While they are gone looking for and gathering the spill supplies. **Ask the group: What did those who went to get the supplies not think of? Could vehicle or foot traffic move through this spill zone and make it worse?** Instruct 1 or 2 persons to stand in front of the spill and direct traffic around it. If traffic cones are available, have someone grab them and set them up.
- When those who went to get the cleanup supplies return, **ask the group: How should we clean up the spill?** They should identify the following actions: 1) stop the flow, 2) isolate the spilled material to keep it from going down the drain inlet, 3) recover the spilled material, and 4) clean up the contaminated surfaces and storm water conveyances. You may need to help walk them through these steps. **Ask the group: How can we keep the material from going down the drain?** Let them suggest ways. **Ask the group: Did any of the spilled material leave the site or go into the drain inlet?** It may be obvious. Try to have placed the bucket so that this is unavoidable. **Ask the group: Where does the drain inlet discharge?** If they don't know, ask them how they can find out. **Ask the group: Is it important to know where the drain inlet discharges?** The answer is, obviously, "yes".
- Tell the group that the spill has now been contained and for the most part cleaned up. **Ask the group the following questions:**
  - **What do we do about the spilled material that went into the drain inlet and, presumably, off site?**
  - **What do we do with the used absorbents and contaminated cleanup supplies?**
  - **If the spill was on soil, what do we do with the contaminated soil?**
  - **If the spill was on a paved surface, will a sheen or contaminants be present the next time storm water flows across the spill zone? What should be done to keep the sheen or contaminants from being washed off by the next storm event?**
- **Ask the group: Who do we need to tell or report to about this spill?** Talk through the notification requirements to CalOES, 911, the local hazardous materials oversight agency, the Regional Water Quality Control Board, and other agencies. In addition, talk about internal company-specific notification, documentation, and reporting requirements.



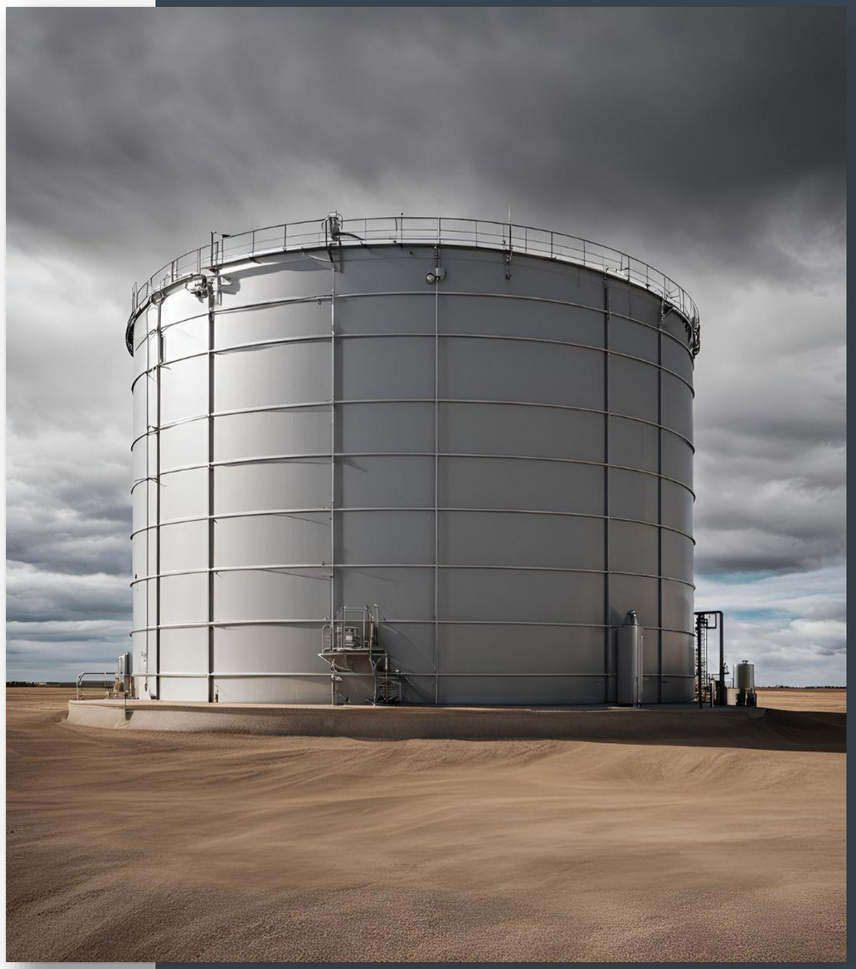
Key Components of an SPCC Plan

- 40 CFR 112.7(g) “Describe in your Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.”



Key Components of an SPCC Plan

- 5 Year SPCC Review
  - You must review your plan every 5 years to include any changes in oil storage or spill prevention procedures or equipment at your facility.
  - If you have a PE Certified plan and you have a technical amendment, you must have your plan re-certified within 6-months of those technical amendment changes on site.
    - Commissioning or decommissioning a tank
    - Piping changes
    - Secondary containment changes
    - Product changes

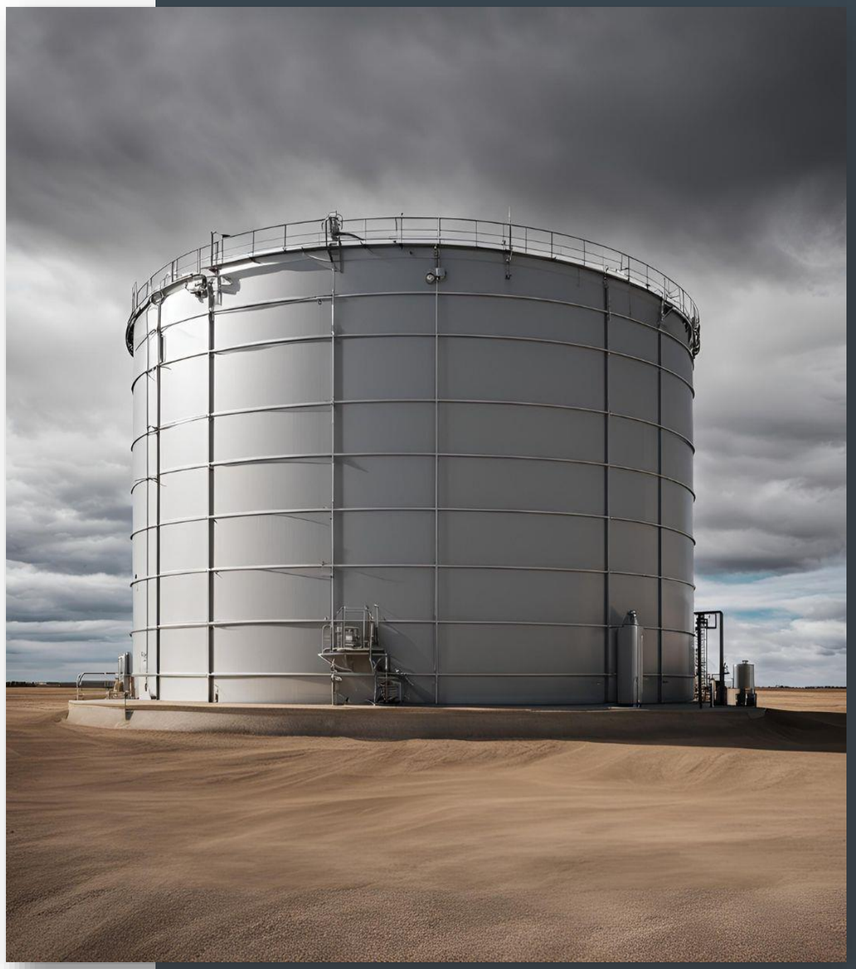


POP QUIZ

Email your answer to:
daspiras@wgr-sw.com

Rules:

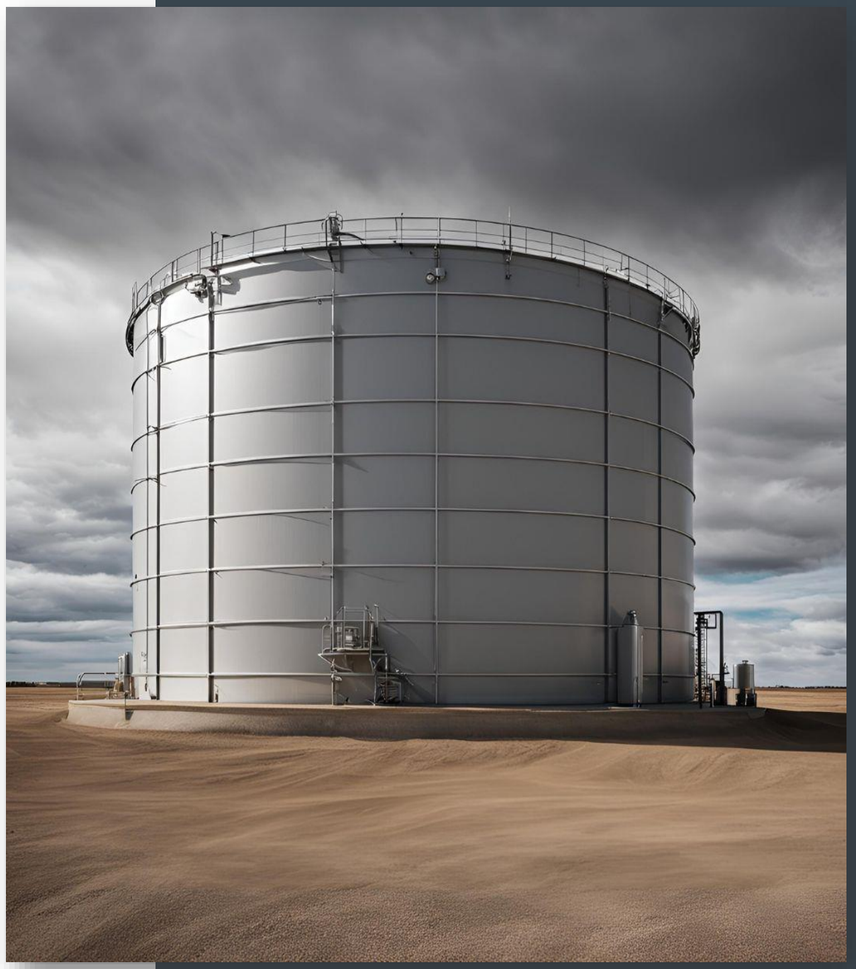
- There will be a total of two quiz questions in this section
- This first person to email me the correct answer will win a $5.00 digital gift card to Starbucks
- Only one winner per quiz question
- If you do win a $5.00 gift card, you cannot win any more for the remainder of this presentation



Quiz Question #1

Which tank inspection standard is typically used for **Shop-built** steel tanks?

A. STI SP001
B. API 653
C. None of the above



Quiz Question #2

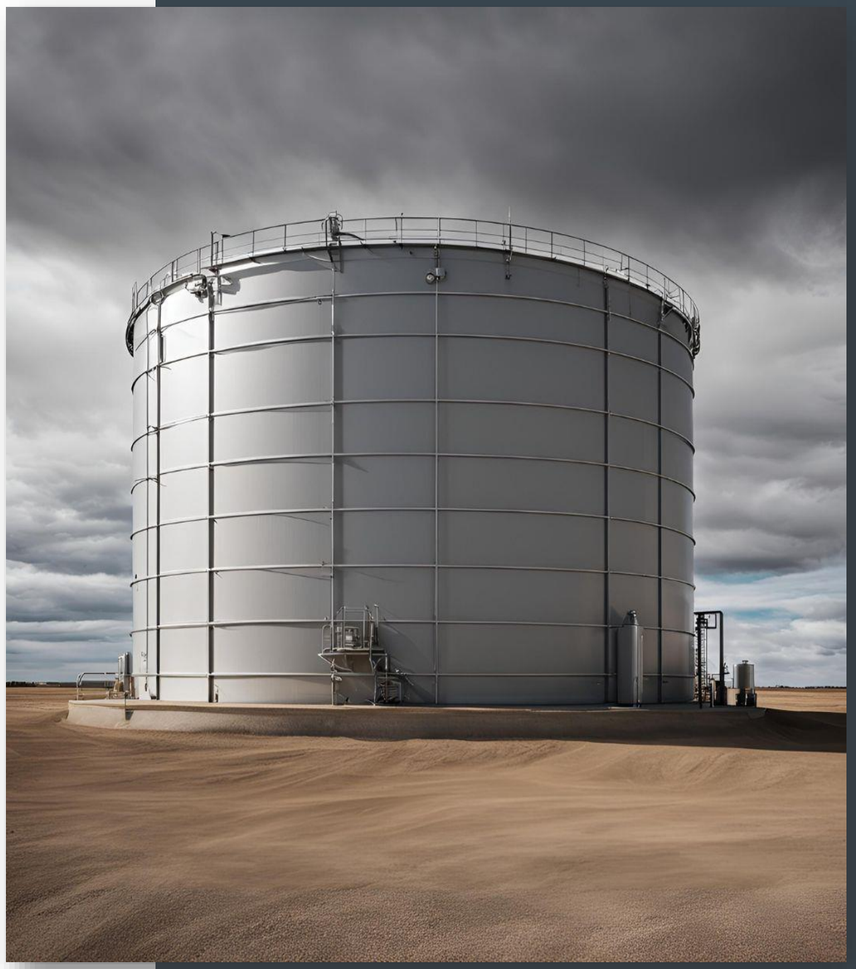
Based on the scenario below, what tier of SPCC Plan will be required?

Scenario: This is an onshore facility that conducts maintenance on large construction equipment and has fueling operations onsite. There is a 5,000-gallon red dye diesel tank in secondary containment, ten 55-gallon drums of motor oil, and ten 55-gallon drums of hydraulic oil. This facility had a spill last year which resulted in 1,200 gallons reaching a navigable waterbody.

A. Tier I

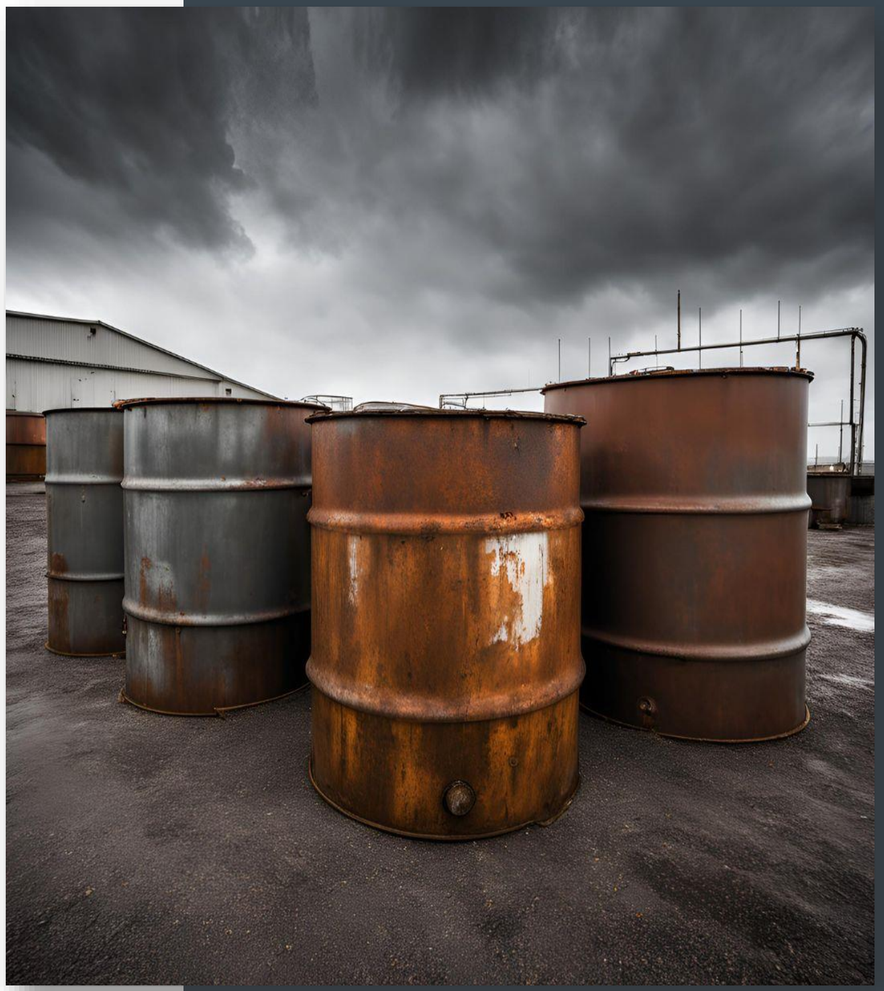
B. Tier II

C. Full PE Certified



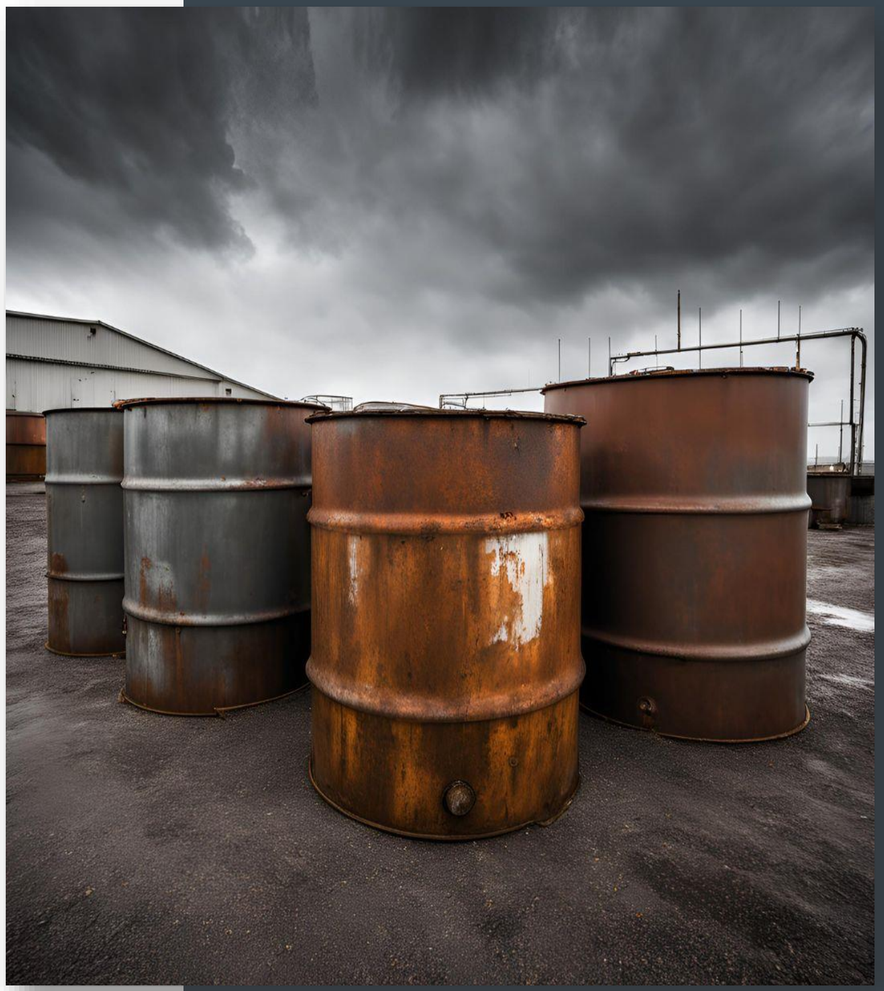
Overview of Hazardous Waste Regulations

- Hazardous waste regulations are pulled for 40 CFR Part 262
- This section of regulation states the general provisions for hazardous waste generators defined in 40 CFR Part 261
- The are three types of generator status to Consider in California



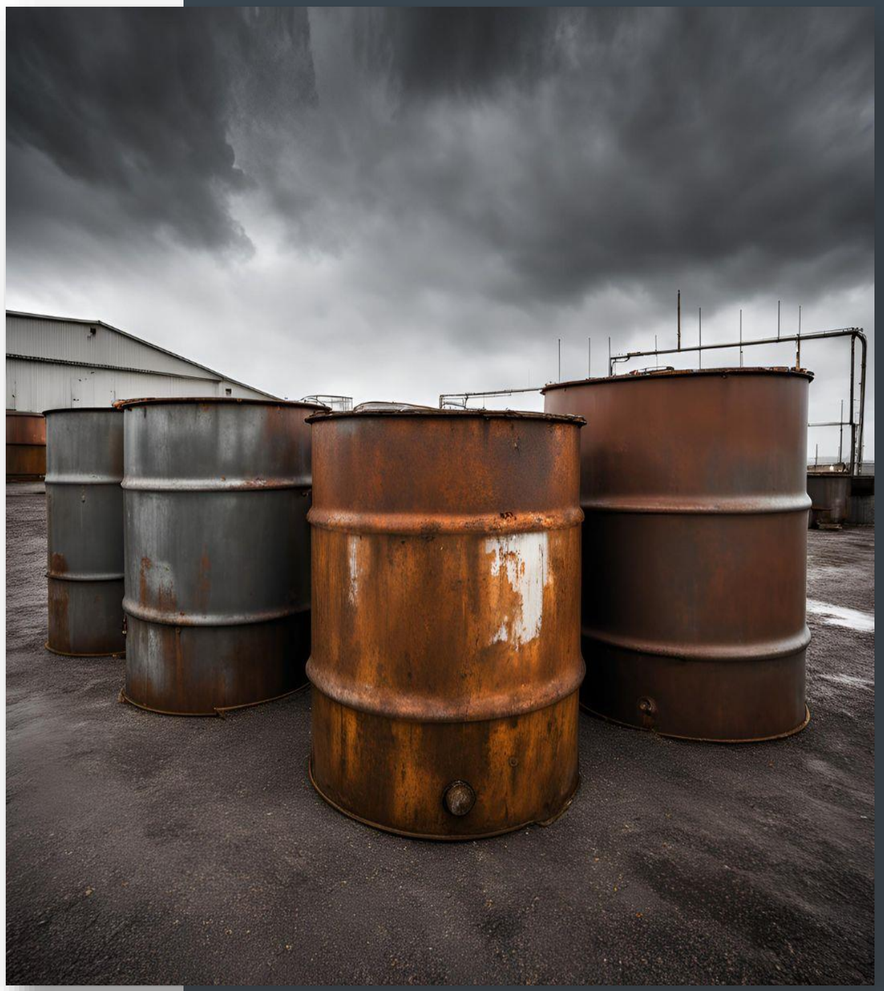
Overview of Hazardous Waste Regulations

- Very Small Quantity Generator (VSQGs)
  - Generates less than 220 pounds or 27 gallons of hazardous waste per month
  - Once 200lbs of waste have been accumulated the 180-day clock begins



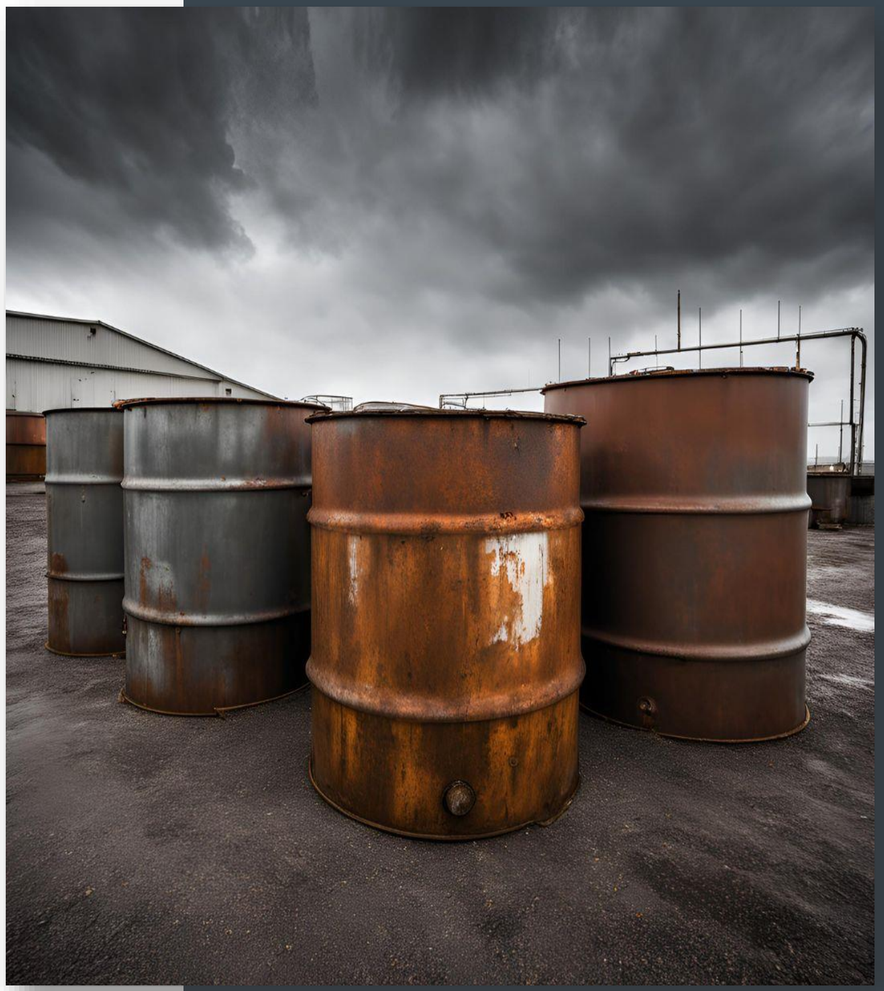
Overview of Hazardous Waste Regulations

- Small Quantity Generators (SQGs)
  - Generates between 220 and 2,200 pounds per month
  - As soon as waste enters the drum or bucket it must be removed within 180 days of accumulation



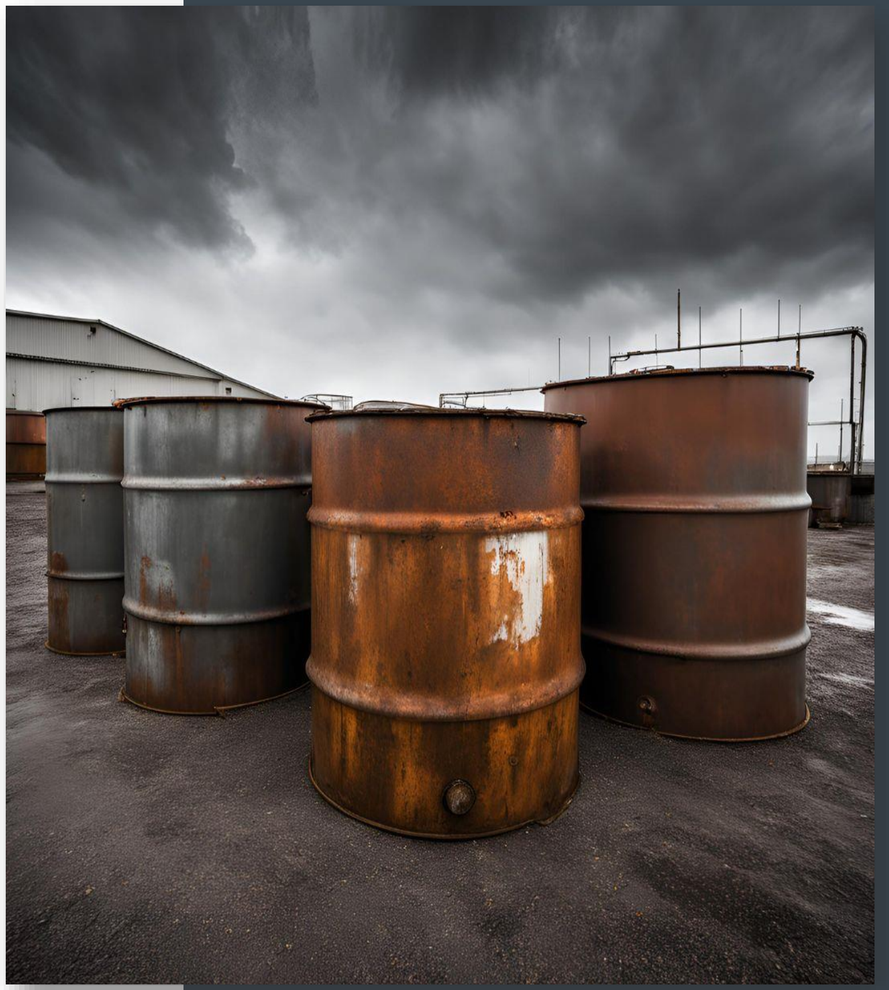
Overview of Hazardous Waste Regulations

- Large Quantity Generators (LQGs)
  - Generates more than 2,200 pounds or 270 gallons of hazardous waste per month
  - As soon as waste enters the drum or bucket it must be removed within 90 days of accumulation



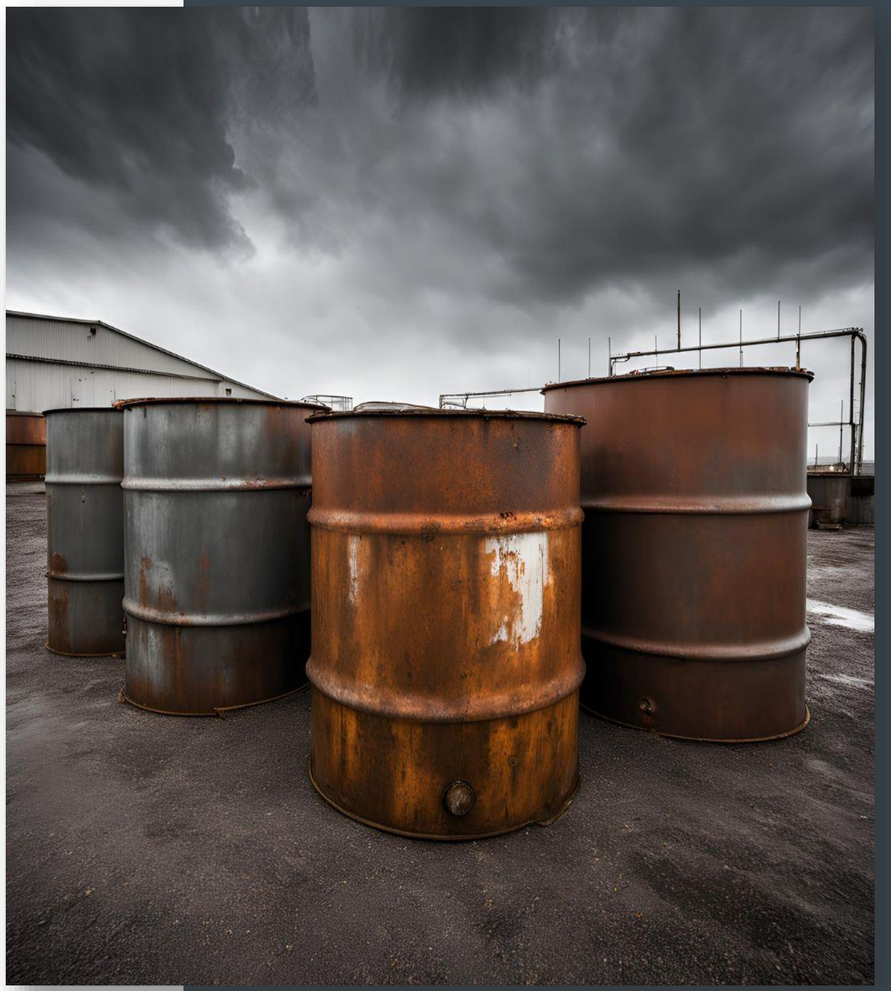
Overview of Hazardous Waste Regulations

- California Environmental Reporting System (CERS)
  - If you have 55-gallons of liquid material or 200 cubic feet of compressed gas or 500 pounds of solid material (HSC 25507)
  - Businesses must create an account to report all hazardous materials onsite if they meet any of these thresholds
  - This website is meant to help first responders to emergency situations onsite at your facility



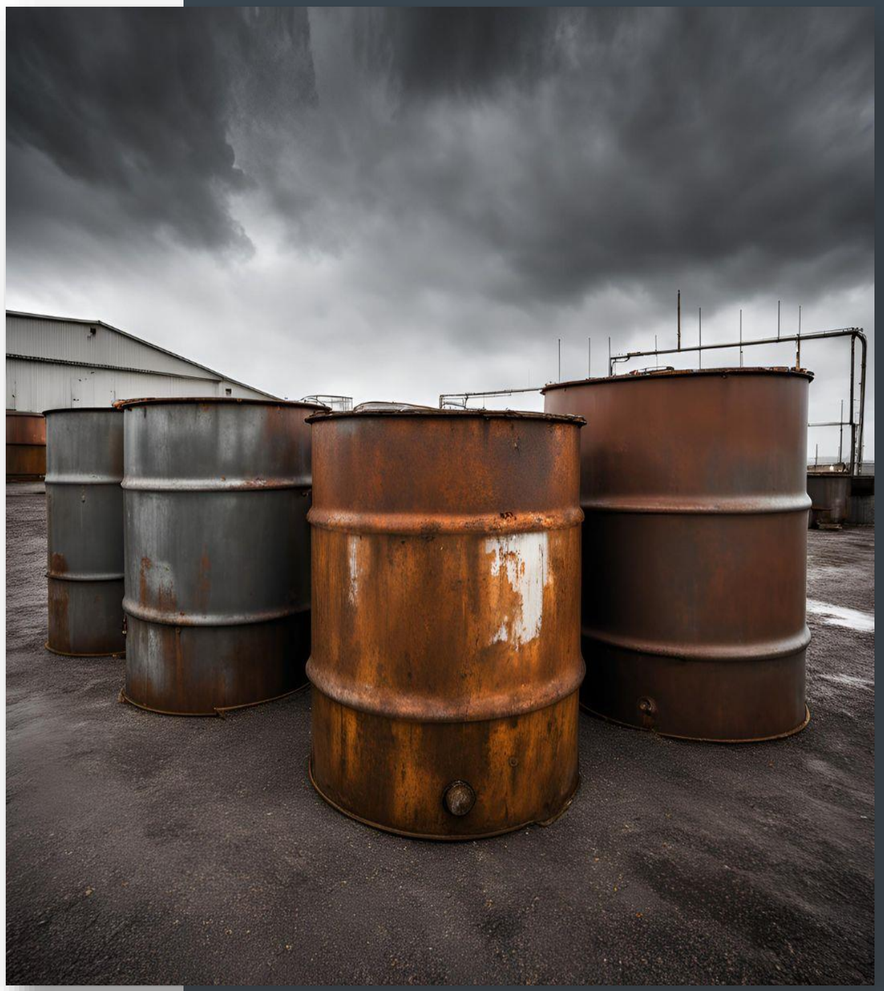
Overview of Hazardous Waste Regulations

- There are two types of classifications of wastes that we deal with in California
  - RCRA (Federally Regulated Waste)
  - Non-RCRA (California Regulated Waste)



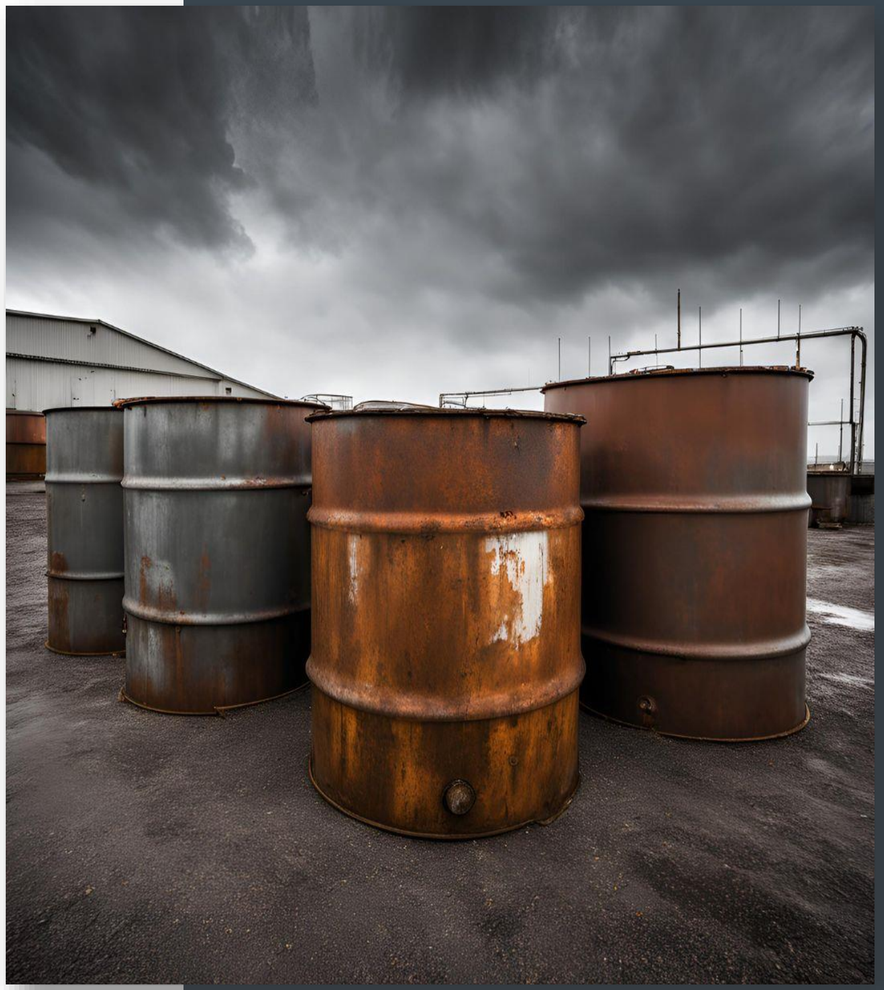
Managing Hazardous Waste

There must be sufficient aisle space to allow for unobstructed movement of emergency personnel and equipment to any area to contain or control fires or spills.



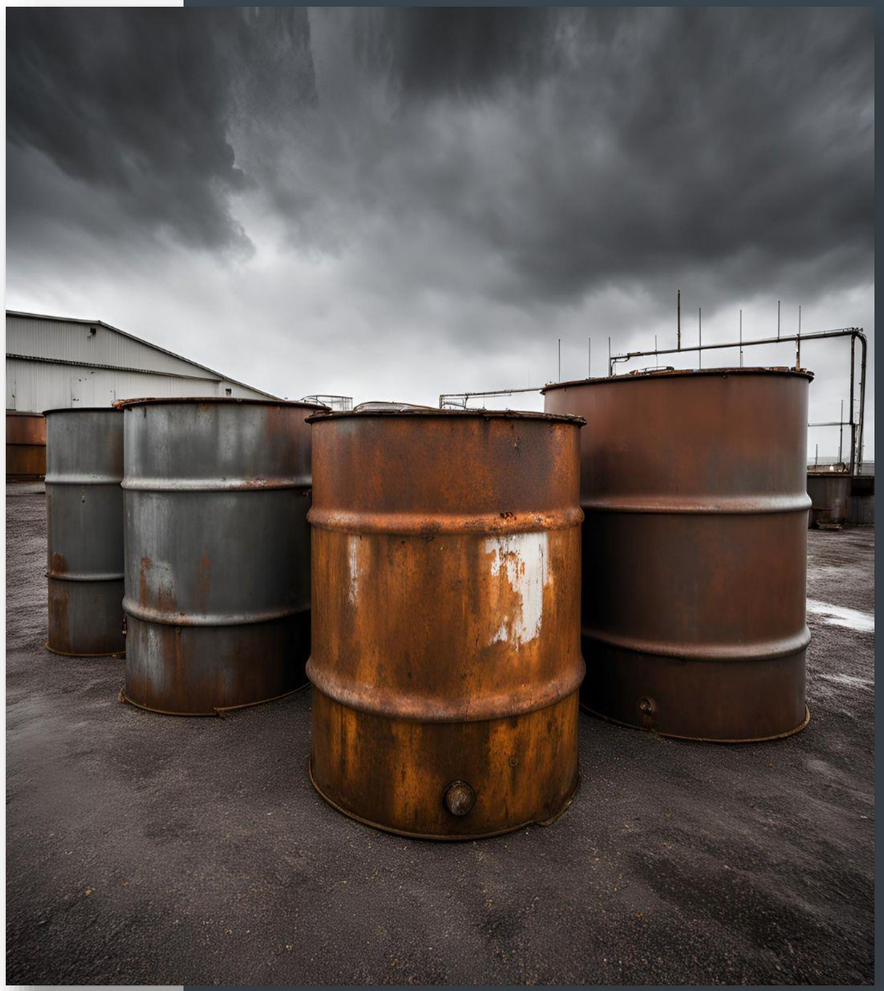
Managing Hazardous Waste

- All hazardous waste containers must be properly labeled with a “Hazardous Waste” label
  - Name & address of business
  - Physical state
    - Solid
    - Semi-solid
    - Liquid
    - Contained gas
  - Hazardous properties
    - Ignitability
    - Corrosivity
    - Reactivity
    - Toxicity
  - Contents
  - Accumulation start date



Managing Hazardous Waste

- Labels
  - Must be clean and readable
    - Check for:
    - Missing or faded dates
    - Improper labeling
    - Damaged label



HAZARDOUS WASTE

STATE & FEDERAL LAW PROHIBIT IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY,
THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR
THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.

PROPER D.O.T. SHIPPING NAME:_____ UN OR NA #:

_____ _____

GENERATOR'S INFORMATION

NAME: _____

ADDRESS: _____

CITY: _____ STATE: CA ZIP: _____

GENERATOR'S EPA ID NUMBER:

_____

MANIFEST TRACKING NUMBER:_____

ACCUMULATION START DATE:

___/___/___

CA WASTE NUMBER:

_____

EPA WASTE NUMBER:

_____

CONTENTS, COMPOSITION: _____

_____

PHYSICAL STATE:
☐ SOLID ☐ LIQUID

HAZARDOUS PROPERTIES: ☐ FLAMMABLE ☐ TOXIC ☐ CORROSIVE ☐ REACTIVE ☐ OTHER

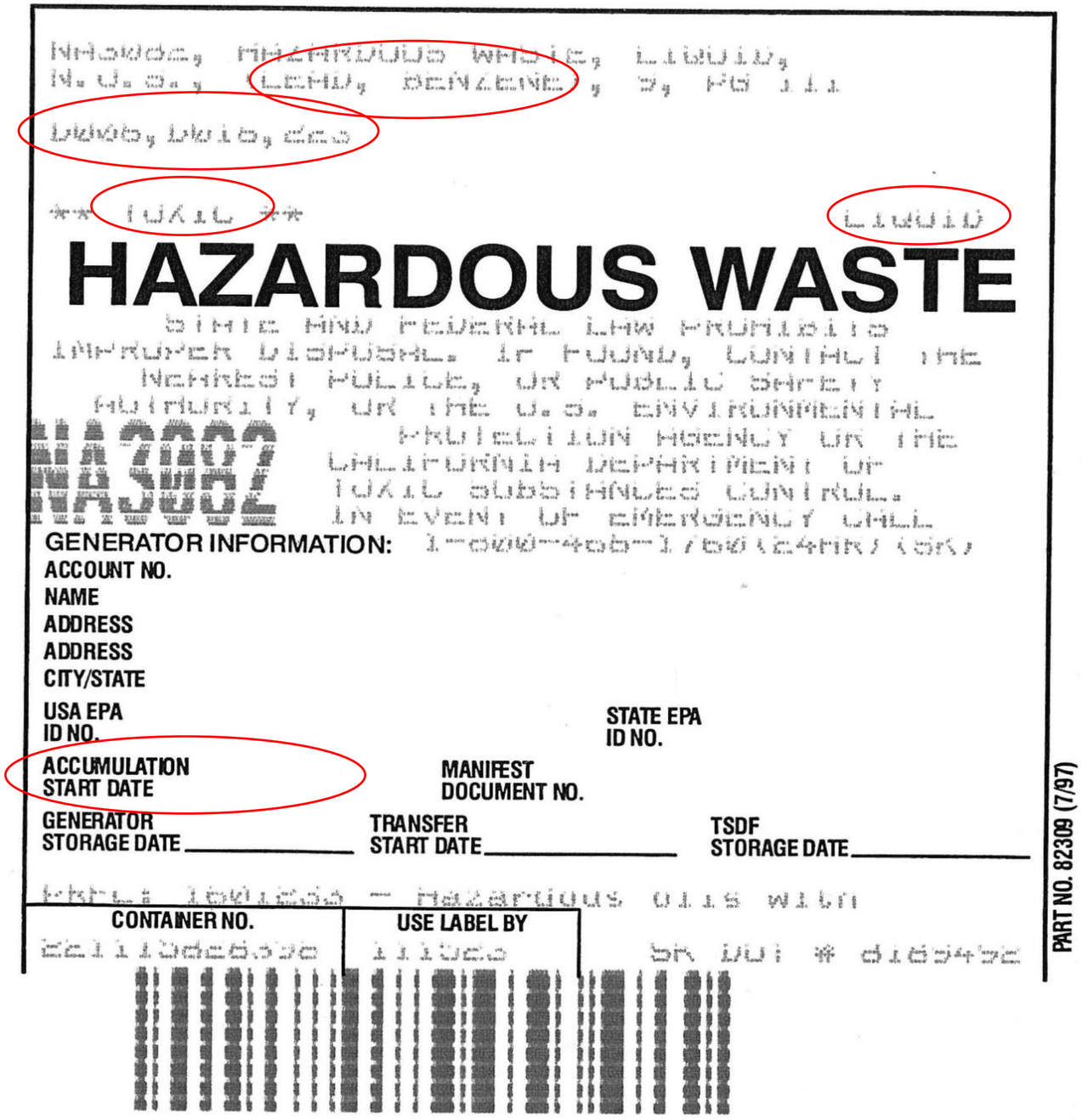
COMPLETE FOR STORAGE

HANDLE WITH CARE!

CONTAINS HAZARDOUS OR TOXIC WASTES

COMPLETE FOR TRANSPORT

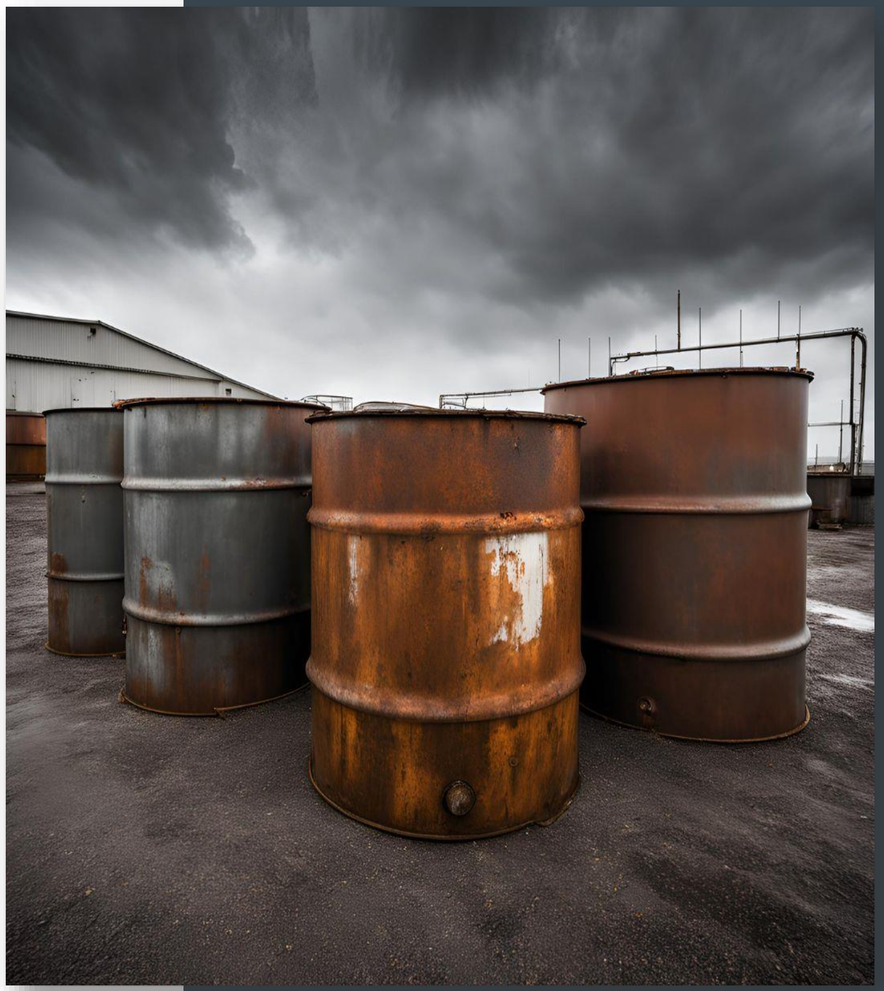
COUNTY OF SAN DIEGO CUPA-DEPARTMENT OF ENVIRONMENTAL HEALTH-HAZARDOUS MATERIALS DIVISION


HAZARDOUS WASTE
GENERATOR INFORMATION:
ACCOUNT NO.
NAME
ADDRESS
ADDRESS
CITY/STATE
USA EPA ID NO.
STATE EPA ID NO.
ACCUMULATION START DATE
MANIFEST DOCUMENT NO.
GENERATOR STORAGE DATE
TRANSFER START DATE
TSDF STORAGE DATE
CONTAINER NO.
USE LABEL BY
PART NO. 82309 (7/97)


UNIVERSAL
WASTE
SHIPPER
ADDRESS
CITY, STATE, ZIP
CONTENTS
ACCUMULATION START DATE

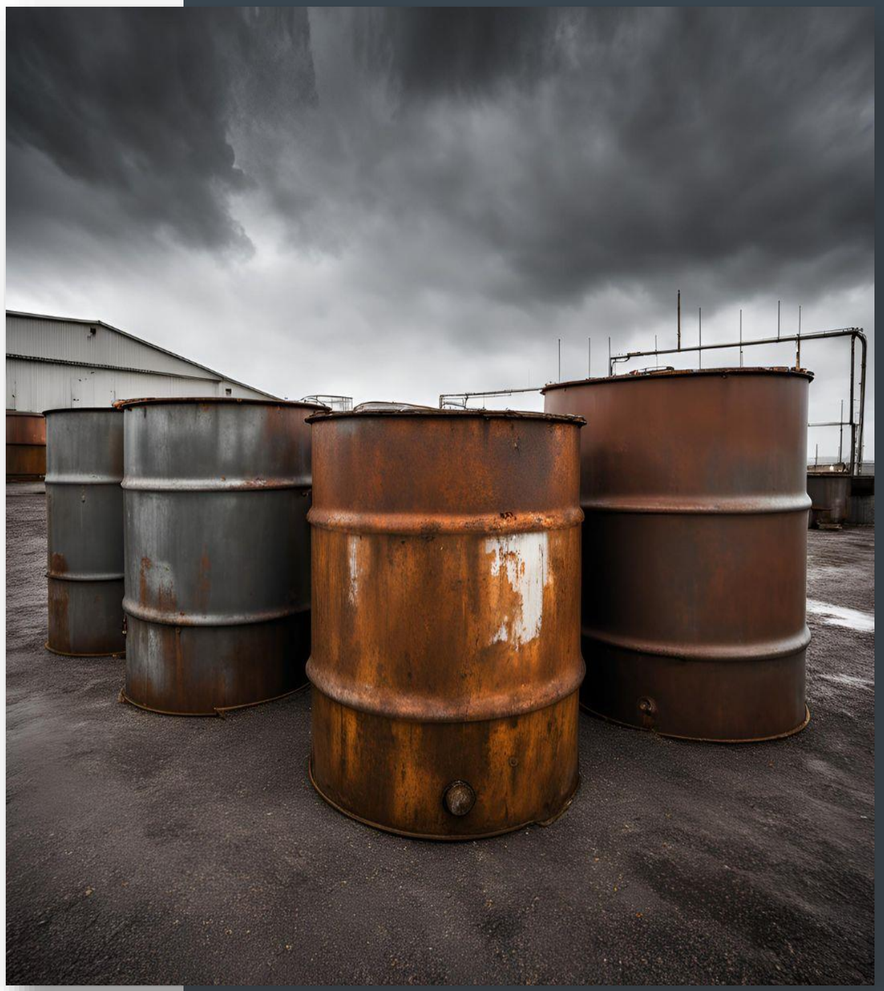
Managing Hazardous Waste

- Hazardous waste containers not actively being used, must be closed.
- Do not overfill a hazardous waste drum
  - If the lid cannot be secured on the drum, then it is too full
- If one of your waste streams is metal or paper used oil filters, the oil must be completely drained before placing them into a container



Managing Hazardous Waste

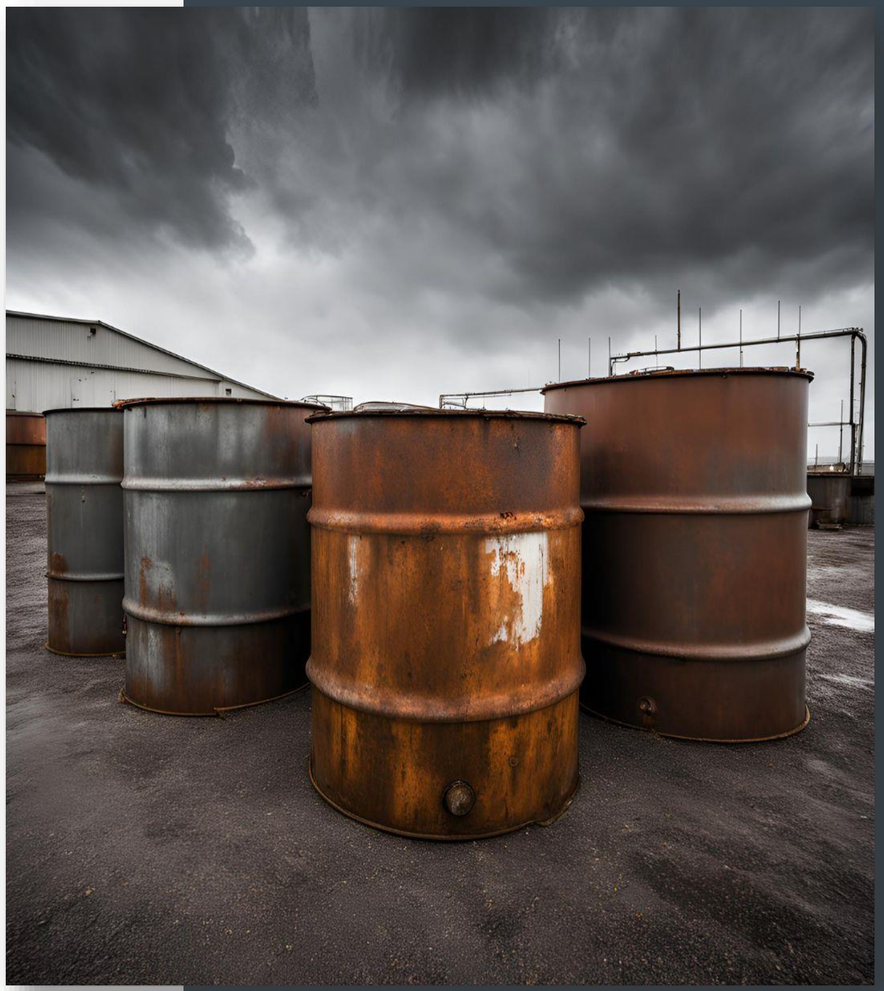
- Lead acid batteries must be:
  - Stored off the ground on a rack or pallet
  - Any damaged batteries should be stored in a closed, leak-proof container and dated
  - Areas where the battery had leaked will need to be removed and disposed of via hazardous waste



Managing Hazardous Waste

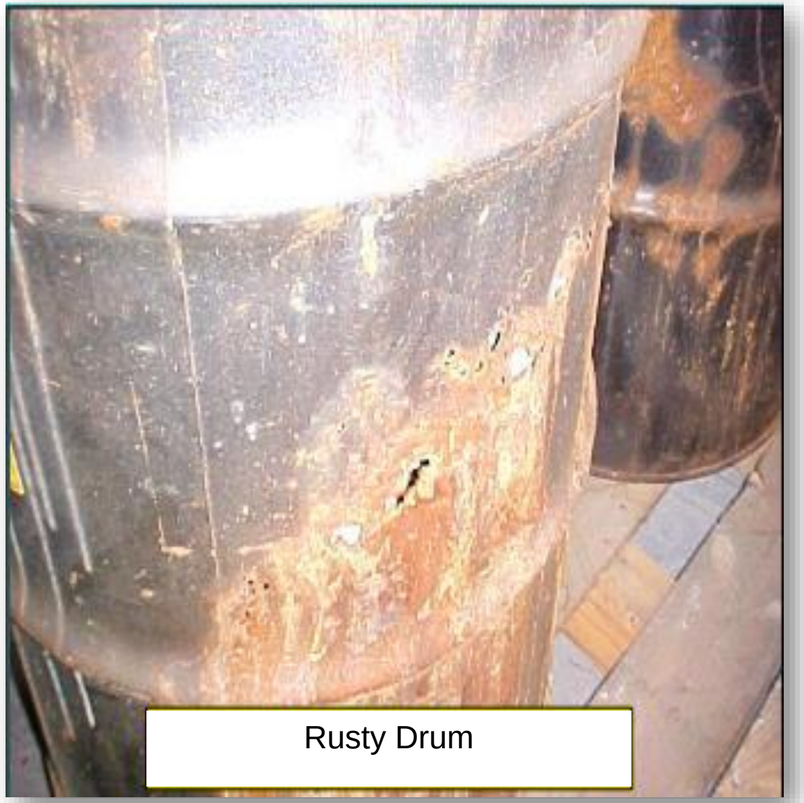
Hazardous waste accumulations areas should be inspected weekly for spills, container condition, and accumulation time.

- Are any of the containers:
  - Leaking?
  - Bulging?
  - Rusting?
  - Corroding?
  - Damaged?
  - Properly labeled?
  - Properly closed?



Managing Hazardous Waste

Are your waste containers in good condition?



Rusty Drum

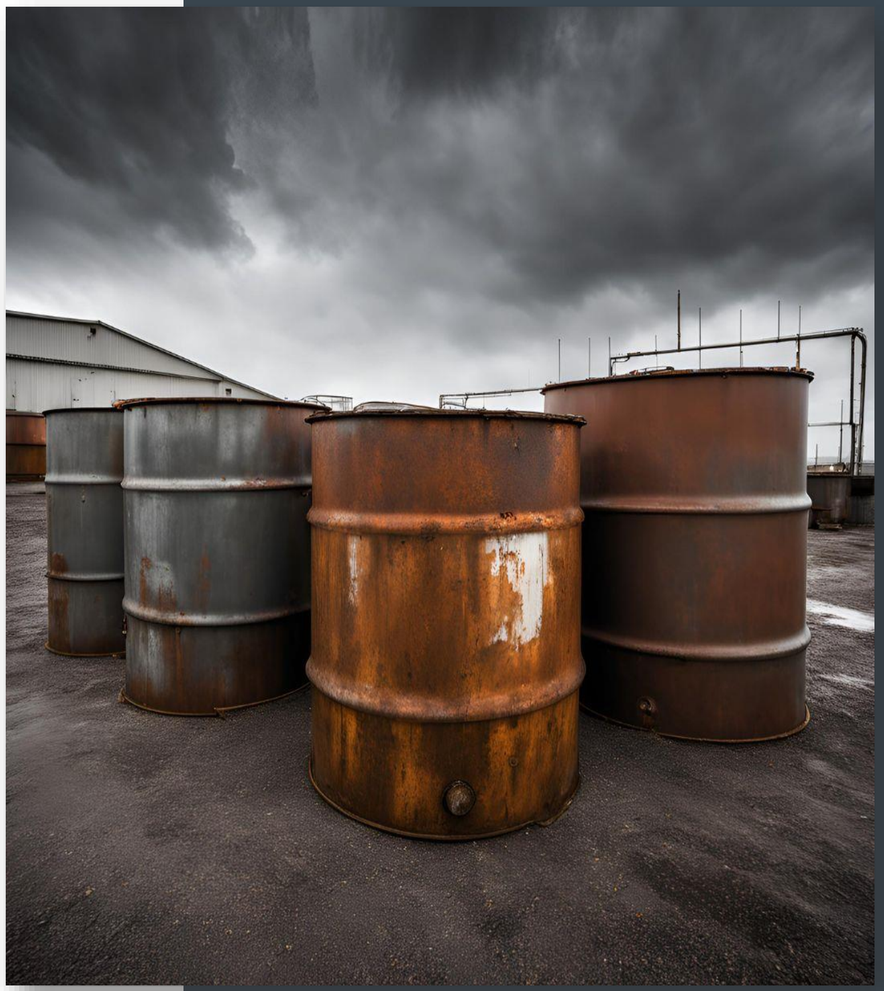
Bulging Drum


1 SP
30

Managing Hazardous Waste

Empty Containers

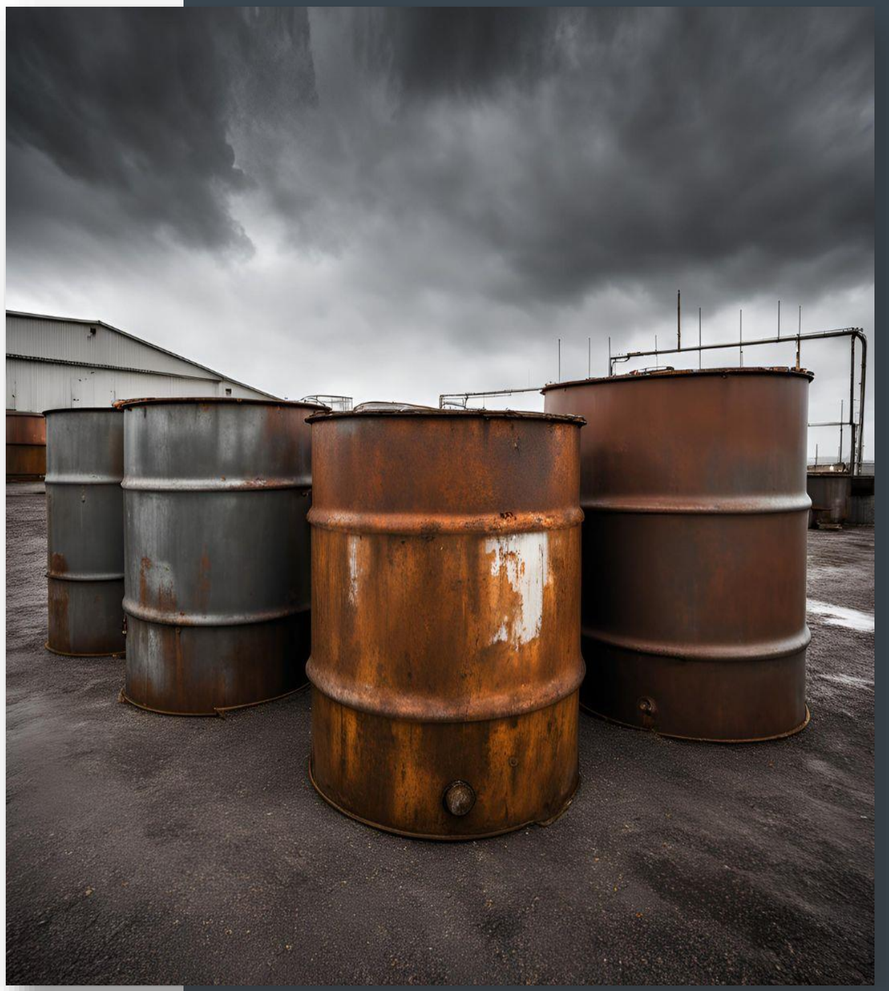
- Empty containers of hazardous materials exceeding 5 gallons in size must be visibly labeled with the date they were emptied and removed off site within 1 year of that date
- Containers 5 gallons or smaller can be placed in the regular trash if they are “California Empty”



Managing Hazardous Waste

Empty Containers

- California Empty
  - Pourable Liquid Containers
    - This is considered empty when there is no longer a pourable or spillable product left in the container
  - Solid/Semi-Solid Containers
    - All contents must be scraped out
  - Aerosol Cans
    - When the propellant and product is completely gone



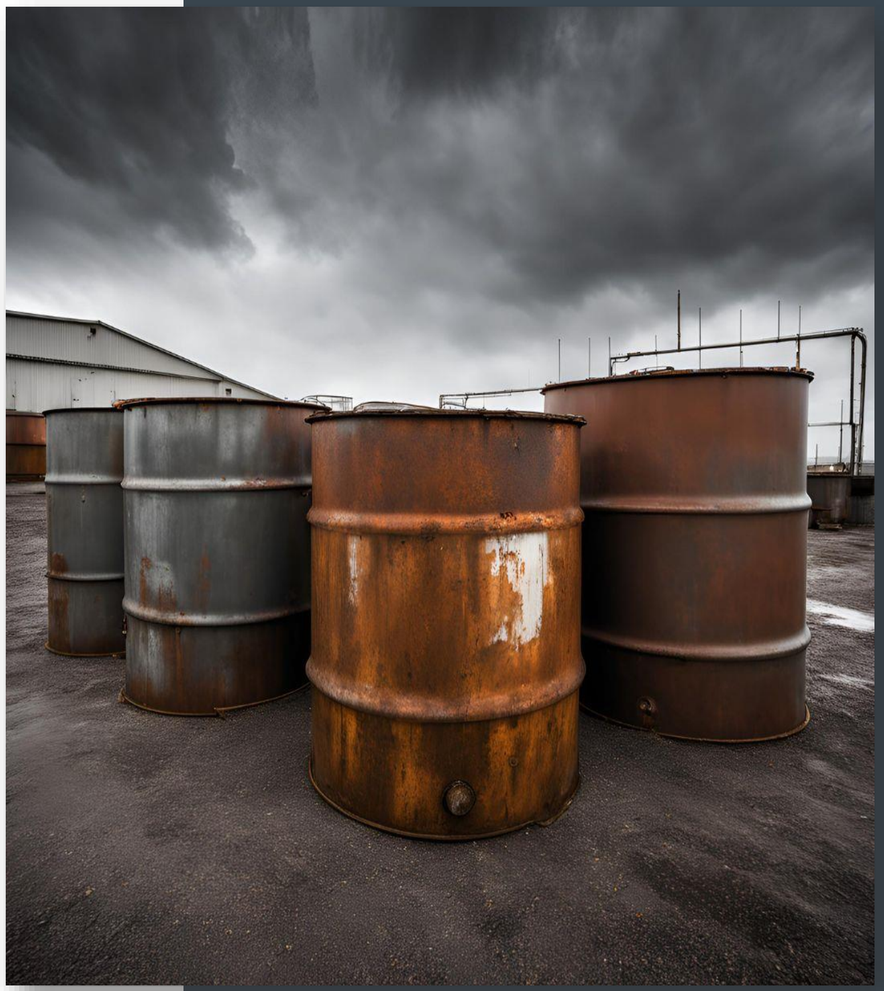
Managing Hazardous Waste

Universal Waste

Items that are considered universal waste are:

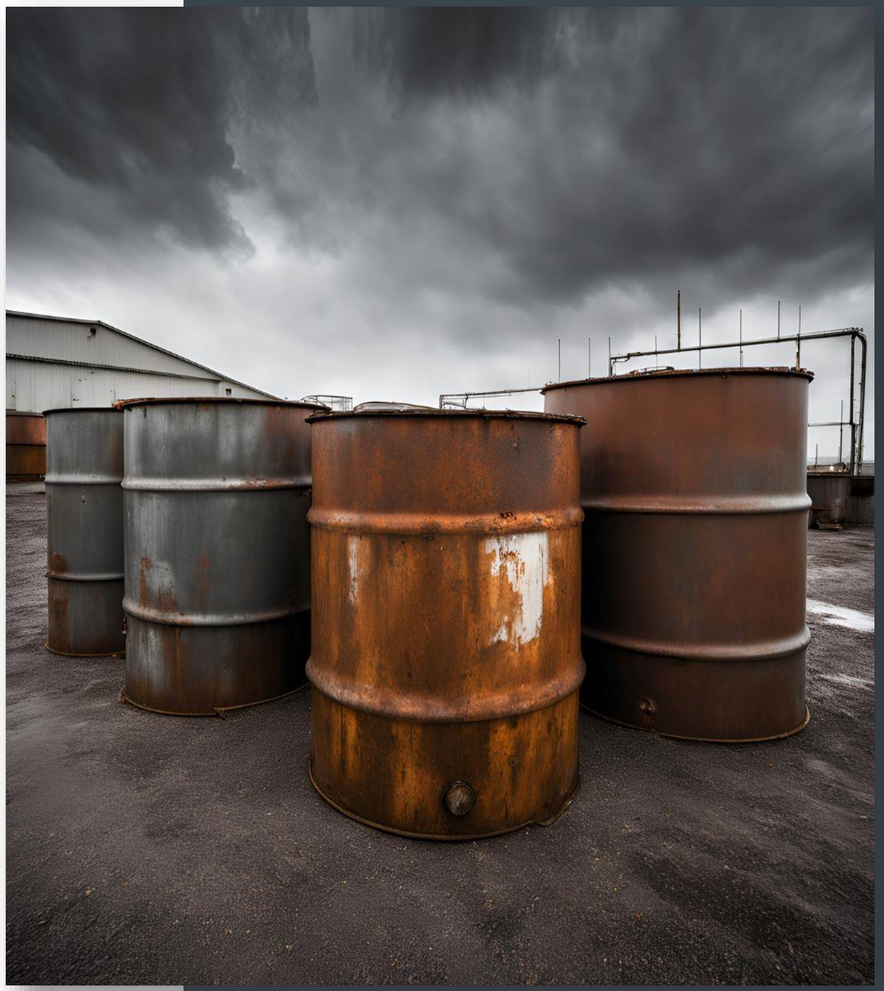
- Fluorescent lamps
- Batteries (not lead-acid batteries)
- Aerosol cans (non-empty)
- Mercury Switches

Universal wastes cannot go into the trash.



Common Violations

- Improper labeling
  - Hazardous wastes missing labels
  - No accumulation start date
  - Mislabeled wastes
- Un-containerized material
- Improper material storage
  - Wrong container type
- Missing manifest records from hazardous waste pickups

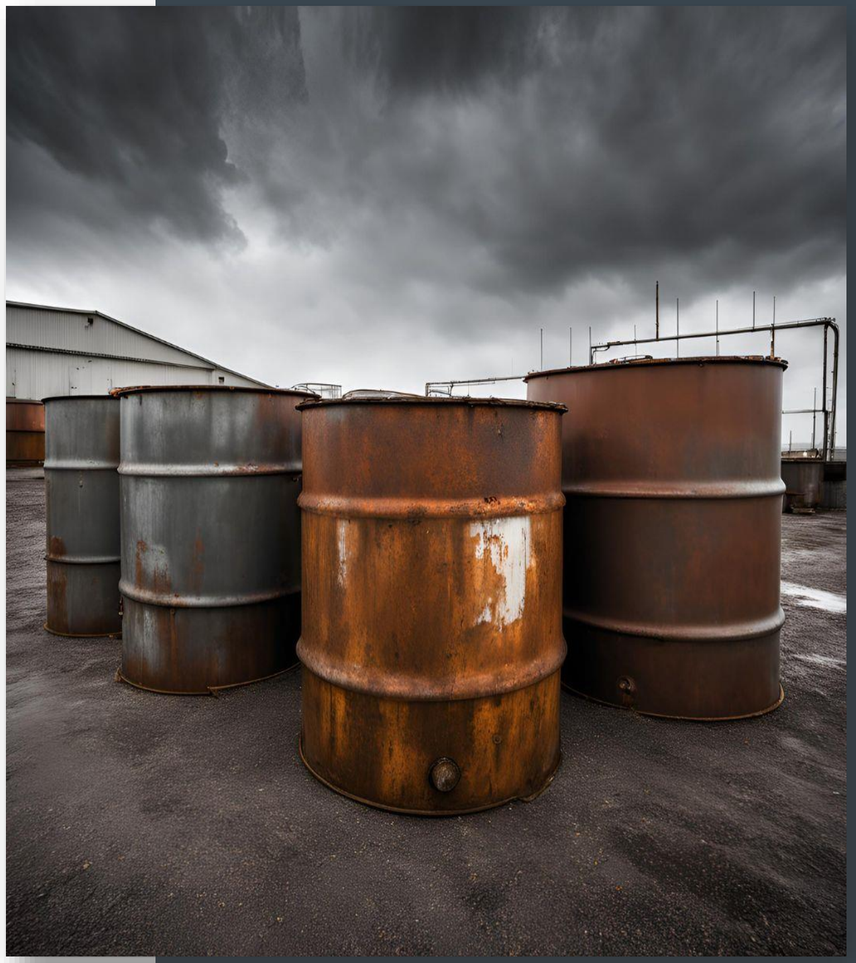


POP QUIZ

Email your answer to:
daspiras@wgr-sw.com

Rules:

- There will be a total of two quiz questions in this section
- This first person to email me the correct answer will win a $5.00 digital gift card to Starbucks
- Only one winner per quiz question
- If you do win a $5.00 gift card, you cannot win any more for the remainder of this presentation

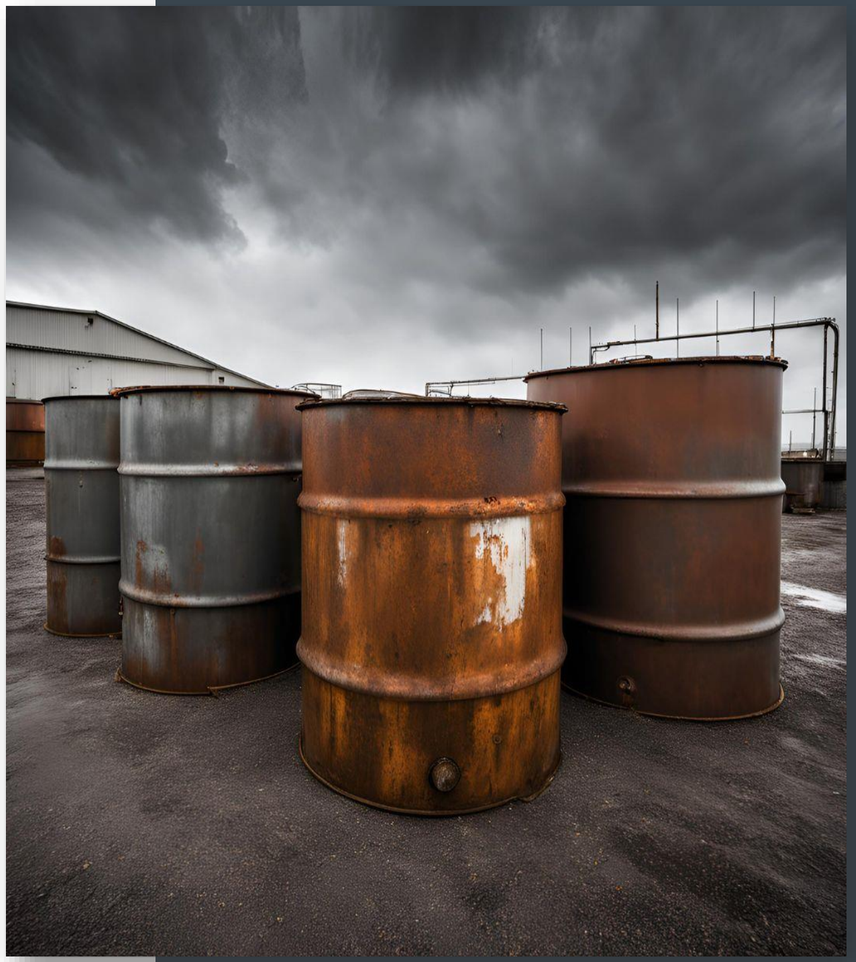


Quiz Question #1

Universal waste can be disposed of in the general trash?

True or False

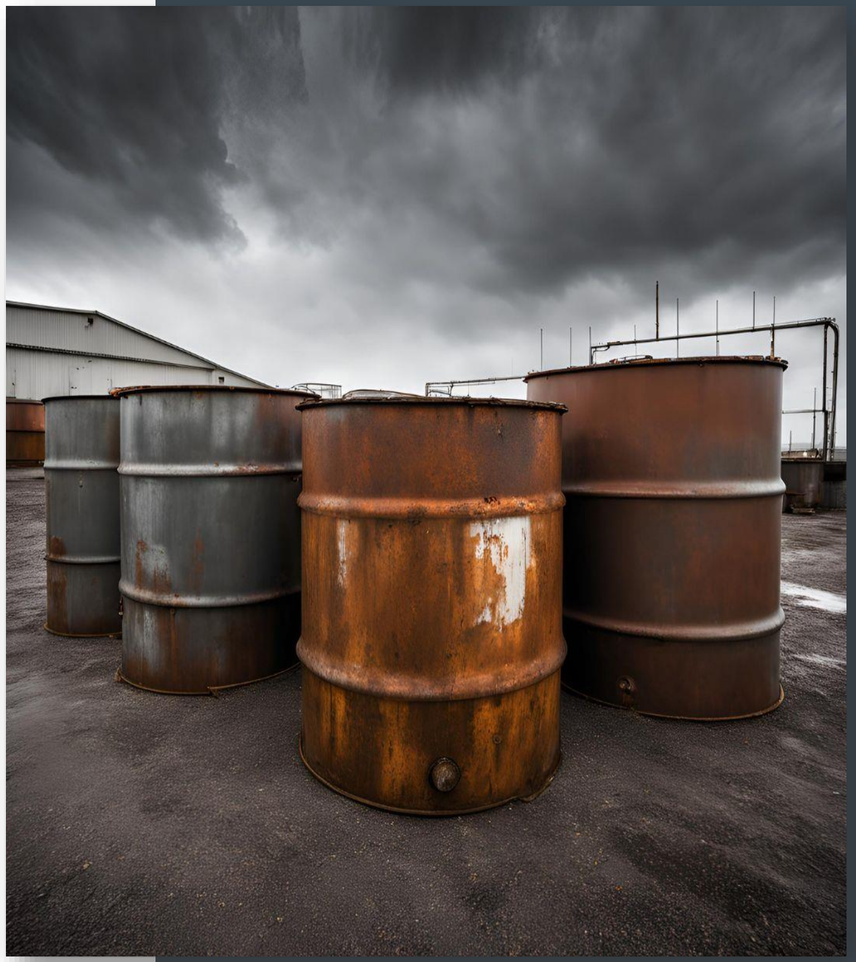
False



Quiz Question #2

I produce 290-gallons of liquid hazardous waste each month. what generator status am I?

A. Very Small Quantity
B. Small Quantity
C. Large Quantity



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