

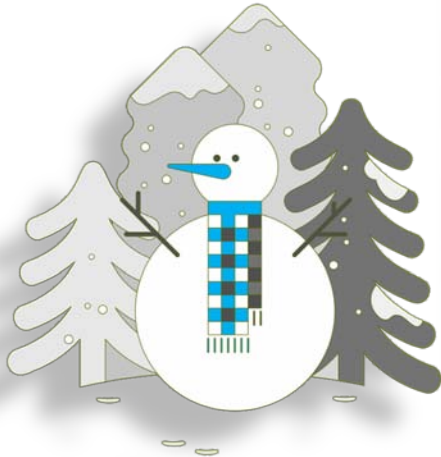
# NEW JERSEY ENVIRONMENTAL RISK MANAGEMENT FUND (EJIF) NEW JERSEY UTILITIES AUTHORITIES

## SPILL PREVENTION AND CONTROL PREPAREDNESS SPCC TRAINING

Presented by:

Rich Erickson  
First Environment

December 2021



# SPCC Presentation Overview

- Plan Description and Objectives
- Regulatory Background
- Facility Description
- Organizational Structure and Responsibilities
- Release Prevention and Response
- Spill Control and Countermeasure

# PLAN DESCRIPTION & OBJECTIVES

# What is SPCC?

Spill

Prevention

Control &

Countermeasure

## Preventing spills:

- Equipment Maintenance
- Inspections
- Secondary Containment
- Petroleum Handling
- Procedures

# What is SPCC?

Spill

Prevention

Control &

Countermeasure

## Controlling spills:

- Spill Response
- Containment
- Notification to proper authorities and agencies
- Clean-up

# Plan Objectives

- Prevent and control accidental discharges of oil to navigable waterways
- Minimize and abate potential for human health and environmental impacts through accidental release of oil
- Outline response and reporting procedures to be followed in event of a release of oil



# REGULATORY BACKGROUND

# Cuyahoga River (Cleveland, OH) – The River That Caught Fire, 1969





# Cuyahoga River – The River that Caught Fire

- NOT the first fire along the Cuyahoga River
  - Nine fires between 1868-1952

# Cuyahoga River (Cleveland, OH) – The River That Caught Fire, 1969



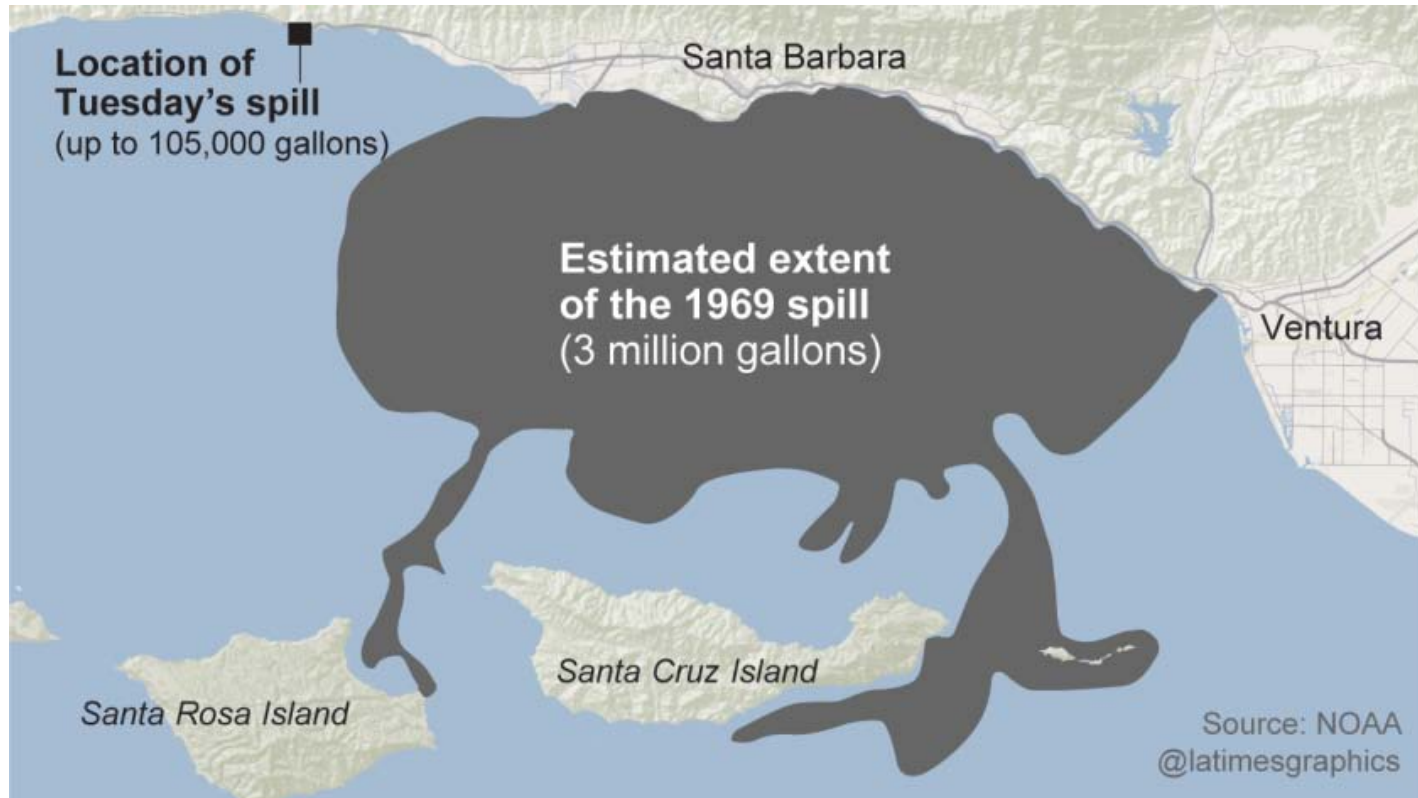
# Cuyahoga River (Cleveland, OH) – The River That Caught Fire, 1969



# Santa Barbara Oil Spill, 1969

- January 28, 1969 – three million gallons of oil spilled into the Pacific Ocean

# Santa Barbara Oil Spill, 1969



# Santa Barbara Oil Spill, 1969





# Applicable Regulations & Guidance

- July 9, 1970 – U.S. EPA proposed regulation (Nixon)
- December 2, 1970 – regulation takes effect
- 1972 – Federal Water Pollution Control Act (Clean Water Act)

*“The goal of this regulation is to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil. The regulation requires these facilities to develop and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans and establishes procedures, methods, and equipment requirements (Subparts A, B, and C).”*

# Applicable Regulations & Guidance

- 1990 - federal (EPA) Oil Pollution Prevention (SPCC rule)
- 1976 NJDEP – Spill Compensation and Control Act (N.J.S.A. 58:10-23.11)



# Who Is Covered?

Any facility with oil storage capacity of:

Aboveground

>1,320 gallons in containers 55 gallons (standard drum) or larger in size

OR

Underground

>42,000 gallons



# Who Is Covered ? - Applicability

AND:

***“which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines...”***

– Huh?? What.....????

# Who Is Covered ? - Applicability

## Navigable Waters:

(1) All navigable waters of the United States, as defined in judicial decisions prior to the passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) Interstate waters;

# Who Is Covered ? - Applicability

## Navigable Waters:

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

# Who Is Covered ? - Applicability

“Quantities that may be harmful”:

- Causes a sheen or discoloration on the surface of the water or adjoining shorelines;
- Causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines; or
- Violates an applicable water quality standard.

# What is Oil?

## According to EPA:

- Fats, oils, greases of animal origin
- Vegetable oils from seeds, nuts, fruits, or kernels
- Other oils and greases (petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse,
- or oil mixed with wastes other than dredged spoil



# Oil Storage

## Typical Public Works Garage/Water Treatment Facility

- Diesel (emergency generators)
- Heating oil
- Mineral oils (transformers and switches)
- Hydraulic oil (elevators)
- Waste oil
- Used cooking oil

# What Do I Need to Do?

Three basic parts:

- Written plan
- Site preparation and equipment
- Personnel and training



# WRITTEN PLANS

# Written Plans

Three types of basic plans:

- Tier 1 Qualified Plans
- Tier 2 Qualified Plans
- Full Professional Engineered Certified Plans

# Tier 1 Qualified Plans

## Tier 1 Qualified Facility

- At least 1,320 gallons (but less than 10,000 gallons) of any type of oil or petroleum product on-site in aboveground storage tanks
- All aboveground tanks are <5,000 gallons
- Cannot have a single discharge of oil greater than 1,000 gallons, or two discharges of oil each greater than 42 gallons within any 12-month period
- Can self-certify
- EPA provides a free template: <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/tier-i-qualified-facility-spcc-plan-template#Tier%20I%20SPCC%20Template>

# Tier 2 Qualified Plans

## Tier 2 Qualified Facility

- Has at least 1,320 gallons but less than 10,000-gallons of any type of oil or petroleum product on-site in aboveground storage tanks
- Can have an aboveground tank larger than 5,000-gallons
- Cannot have a single discharge of oil greater than 1,000 gallons, or two discharges of oil each greater than 42 gallons within any 12-month period
- Can self-certify

# Full Professional Engineered Certified Plans

## Full Professional Engineered Certified Plans

- >10,000-gallons of any type of oil or petroleum product on-site
- No limit on aboveground tank sizes
- Certified by a Professional Engineer (PE)

# Written Plans

## Organizational Structure and Responsibilities



Spill Abatement, Repair, and Notification

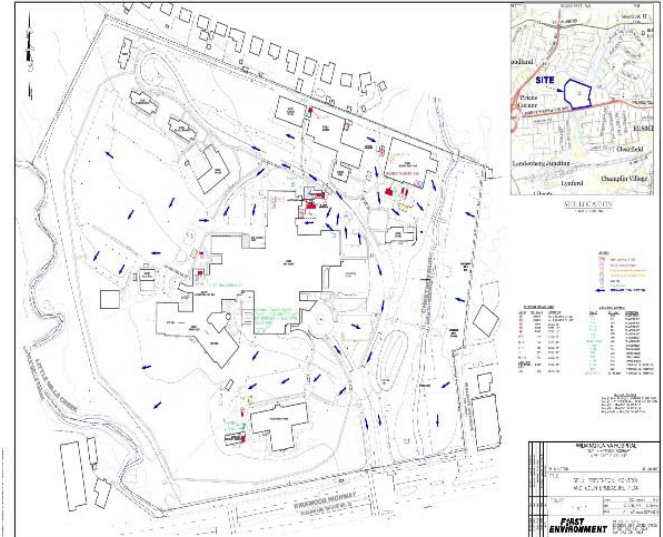
# Manager Responsibilities

- Oversees necessary submittals and reports to regulatory authorities
- Audits facility conformance with SPCC plan
- Conducts annual review of SPCC plan and initiates revisions, if necessary
- Coordinates waste disposal activities
- Coordinates SPCC training to ensure effective implementation of the plan

# Petroleum Storage Locations

Need a site plan showing location of:

- Storage tanks
- Oil drums (55 gallon and larger)
- Transformers
- Other petroleum sources (>55 gal)





# Inspection and Monitoring Program

Monthly inspections for:

- Oil-filled equipment
- Storage tanks (ASTs and USTs)
- Appurtenances, piping, and containment areas
- Property damage or leakage
- Stained or discolored soils
- Veeder-Root test



START IN-TANK LEAK TEST  
TEST BY PROGRAMMED TIME  
JUN 20, 2011 12:00 AM

TEST LENGTH 4 HOURS

T 1:BLDG 19 GEN.TANK  
VOLUME = 2050 GALS  
ULLAGE = 450 GALS  
90% ULLAGE= 200 GALS  
TC VOLUME = 2047 GALS  
HEIGHT = 48.91 INCHES  
WATER VOL = 7 GALS  
WATER = 0.96 INCHES  
TEMP = 62.7 DEG F

\*\*\*\*\* END \*\*\*\*\*

# Inspection & Monitoring Program



- Excessive accumulation of water or debris in containment areas (records should indicate whether oil was present in accumulated rainwater)
- Catch basins for sediment-related clogging



# Monthly Inspection Checklist

[illegible]

EPA has a sample monthly checklist you can copy here:

[https://www.epa.gov/sites/production/files/2014-07/documents/onshore\\_production\\_checklist\\_june\\_2014\\_for\\_web.pdf](https://www.epa.gov/sites/production/files/2014-07/documents/onshore_production_checklist_june_2014_for_web.pdf)

# Substantial Harm Criteria

## ATTACHMENT C-II-CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

FACILITY NAME: \_\_\_\_\_

FACILITY ADDRESS: \_\_\_\_\_

1. Does the facility have an oil storage capacity that is greater than or equal to 42,000 gallons and conduct operations that include over-water transfers to or from vessels?  
☐ Yes  
☐ No *proceed to questions below*
2. Does the facility have an oil storage capacity greater than or equal to one million gallons **and** does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation with any aboveground storage area  
☐ Yes  
☐ No *proceed to next question*
3. Does the facility have an oil storage capacity greater than or equal to one million gallons **and** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula 1) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DCC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.  
☐ Yes  
☐ No *proceed to next question*
4. Does the facility have an oil storage capacity greater than or equal to one million gallons **and** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula 1) such that a discharge from the facility would shut down a public drinking water intake?  
☐ Yes  
☐ No *proceed to next question*
5. Does the facility have an oil storage capacity greater than or equal to one million gallons **and** has the facility experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?  
☐ Yes  
☐ No *proceed to next question*

### Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature \_\_\_\_\_

Name (please type or print) \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

### Footnotes:

1. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.
2. For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

EPA requires a “Certification of the Applicability of Substantial Harm Criteria”

A copy can be found:

[https://www.epa.gov/sites/production/files/2014-05/documents/attachment\\_c-ii\\_certification\\_of\\_substantial\\_harm.pdf](https://www.epa.gov/sites/production/files/2014-05/documents/attachment_c-ii_certification_of_substantial_harm.pdf)

# SITE PREPARATION & EQUIPMENT

# Release Prevention & Response



- Concrete pads surrounding oil-filled operational equipment provide adequate release identification with regular inspections
- Regulated USTs meet minimum requirements for secondary containment, overfill prevention, and release detection

# Release Prevention & Response

## Secondary containment for ASTs





# Release Prevention & Response

## Secondary containment for ASTs





# Release Prevention & Response

## Oil transfer area preparation



# Release Prevention & Response

Oil transfer area preparation – NOT!



# Release Prevention & Response

Secondarily contained ASTs can also have leak detection monitoring



# Release Prevention & Response

## Drum storage area





# Release Prevention & Response

## Spill clean up equipment



# Release Prevention & Response

- Routine maintenance and inspections of all operations and installations
- Include inspection, replacement or repair of:
  - Pumps
  - Seals
  - Gaskets
  - Valves
  - Monitoring instrumentation
  - Alarms



# PERSONNEL & TRAINING

# Facility Security

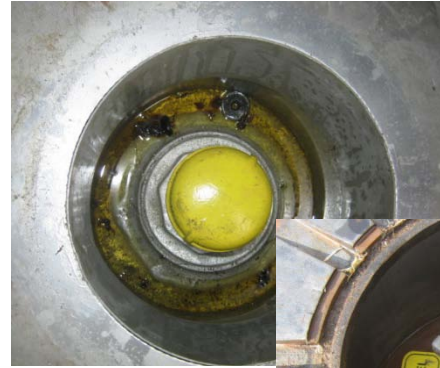
- Keep all valves that may drain or discharge oil in a closed position and locked when not in use
- Lock all starter controls on pumps in the “off” position and make accessible only to authorized personnel
- Provide adequate lighting for nighttime operations and to prevent vandalism





# Oil Transfer Operations

- Only trained personnel conduct transfer of materials to and from oil storage tanks
- Terminal connections should be capped when not in use
- ASTs labeled with storage tank ID, contents, and tank capacity (excludes electrical equipment)
- Spill containers require 30-day inspections



# SPILL CONTROL & COUNTERMEASURES

# Emergency Spill Abatement

- Emergency spill abatement is triggered by a fire, explosion, or release of 10 gallons of oil or greater
- Local fire department/emergency response contractors take lead role in characterization, source identification, release investigation, and hazard assessment
- Initiate necessary containment measures
- Safety office to provide re-entry assessment

# Emergency Spill Abatement

- Notify NJDEP/Local Hazmat (911) authorities concerning a release, fire, or explosion which would threaten human health or the environment
- Internal and external communications and alarms
- Evacuation plan

# Individual Identifying an Oil Spill or Release

- If possible, begin activities to stop the source of the release
- Call 911/designated number to initiate spill notification and abatement activities or receive additional instruction
- Initiate containment and cleanup activities if properly trained



# Individual Identifying an Oil Spill or Release

## Be prepared to identify the following:

- Time and location of incident
- Nature of materials or wastes involved
- Cause of release
- Possible hazards to human health and environment
- Estimated quantity of materials or wastes spilled
- Implemented containment efforts
- Extent of injuries, if any

# Non-Emergency Spill Abatement

- Releases <10 gallons that do not reach navigable waters
  - Clean up using internal resources
- Abatement
  - Address with trained personnel based on previous experience and familiarity with spilled material
- Health and safety concerns
- Request assistance from additional internal parties (e.g., emergency response companies)



# Spill Containment

## If you are trained:

### Begin spill containment

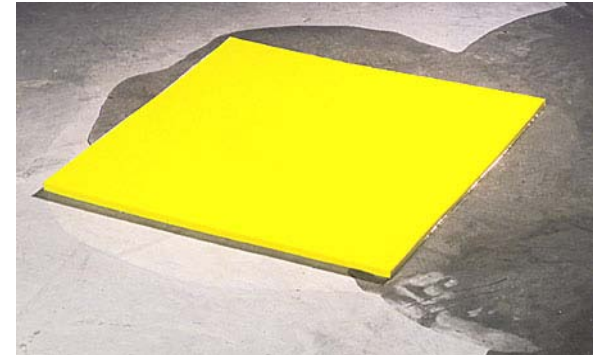
- Assess the situation
- Alert area personnel
- Check the MSDSs as needed
- Ventilate area and control ignition sources





# Spill Containment

- Use available spill clean-up materials
- Protect surrounding ground surfaces and drains
- Ensure personnel are decontaminated as needed



# Spill Containment

- Notify your supervisor immediately if spill has reached any storm drains
- Recover spilled materials to extent possible using available materials
- Cleanup and stage spill residue in new 55 gallon drum(s)



# Good Oil Handling and Storage Practices

- Portable containers stored on spill pallets or in diked areas
- All storage containers labeled appropriately (including gas/oil mixtures)
- Drum lids and caps are in place and secured when container is not in use
- Drum spacing allows for easy inspections of containers
- Older product no longer used is discarded or recycled



# Good Oil Handling and Storage Practices

- All storage containers are in good condition
- Drip pans are used as needed and emptied after use
- Location of storm and building drains are considered when conducting work or storing material



# Bad Oil Handling and Storage Practices

- Materials stored in the wrong place
- Spill prevention equipment not maintained





# Bad Oil Handling and Storage Practices

- Materials stored in the wrong place
- Spill prevention equipment not maintained



# Bad Oil Handling and Storage Practices





# Bad Oil Handling and Storage Practices





# Bad Oil Handling and Storage Practices



# Additional Resources

- **EPA - A Facility Owner/Operator's Guide to Oil Pollution Prevention:** <https://www.epa.gov/sites/production/files/documents/spccbluebroch.pdf>
- **EPA - SPCC Guidance for Regional Inspectors:** <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/spcc-guidance-regional-inspectors>
- **EPA - SPCC Basics Presentation:** [https://www.epa.gov/sites/production/files/2014-05/documents/spcc\\_basics.pdf](https://www.epa.gov/sites/production/files/2014-05/documents/spcc_basics.pdf)
- This presentation is available on the EJIF Website!  
<http://www.njejif.org/environmentalinformation/seminarpresentations.html>

# QUESTIONS?

Rich Erickson  
[rerickson@firstenvironment.com](mailto:rerickson@firstenvironment.com)