

## **Today's Topics**

- NJ's Municipal Stormwater Regulation Program (MSRP)
  - Introduction of the EJIF Employee Training Video
  - •Where should you be now?
  - •1st Permit Cycle ends April 2009
- Focus: Illicit Connections & Investigations





## **EJIF Employee Training Video**

EJIF Stormwater Training Video –
 October 1 Launch on MEL website

# www.njmel.org

 NJDEP has approved video as a mechanism to satisfy the Annual Employee Training Requirement





## **EJIF Employee Training Video**

- Tool for employee training
- Must train appropriate employees on appropriate topics
- Should have other resources available such as the SPPP, NJDEP Guidance Document, Ordinances, etc.
- DVD copies of stormwater training video will be made available, by request, at a later date



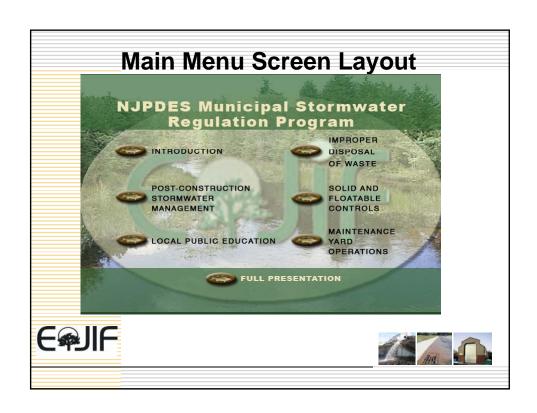


# **Don't Forget to Document Your Training**

- The following must be included with the Annual Report:
  - Date of Training
  - Topics Covered
  - Employee's Names
  - Sign in Sheets
  - Description of Training Materials
     Used







## **EJIF Employee Training Video**

Municipal Stormwater Regulation Program Employee Training Video Introduction





## By Now, Everyone Should Know How We Got Here



- February 2, 2004 NJDEP published NJPDES amendments in response to EPA's Phase II Rules
- Municipal Stormwater Regulation Program
  - All 566 NJ municipalities.
  - All 21 NJ counties.
  - State, county and interstate transportation entities.
  - Some public complexes, such as colleges/universities, hospitals, prisons, etc.
  - Some municipal industrial operations (e.g. wastewater treatment plants)





## **Municipal Stormwater Regulation Program**

- Tier A and B General Stormwater Permits
  - Both required adoption of a Municipal Stormwater Management Plan and Stormwater Control Ordinance by April 2006
- Tier A required the completion of a Stormwater Pollution Prevention Plan by April 2005
- Permit Cycle Based Upon EDPA (Typically 4/1 through 3/31)





### Where should you be today?

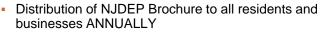
- Post Construction
  - Municipal Stormwater Management Plan and Stormwater Control Ordinance must be adopted
  - Municipality must be implementing Post Construction Management
    - Ensuring Compliance with RSIS
    - Completing long term O&M of BMPs on municipal properties
    - Ensuring the long term O&M for BMPS on private properties is conducted
    - Meeting new design standards for storm drain inlets
    - Ensuring compliance with the stormwater control ordinance





#### Where should you be today?

Implementing Local Public Education



- NJDEP will be introducing Tip Cards
- Conducting an ANNUAL educational event
- Distributing pet waste brochure with pet licensing
- 50% complete with storm drain inlet labeling program by April 2007 (100% by 2009)





## Where should you be today?

Implementing Improper Disposal of Waste

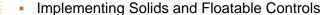


- Implementing Illicit Connection Elimination Program and complete initial inspections of all outfalls by April 2009
- 50% complete with storm drain outfall mapping program by April 2007 (100% by 2009)





#### Where should you be today?



- Performing monthly street sweeping and recording waste totals & distance swept
- Retrofitting storm drain inlets during road projects
- Annual inspection and cleaning of all stormwater facilities
- Implementing roadside erosion control and outfall stream scouring remediation programs







## Where should you be today?

- Implementing Maintenance Yard Operations BMPs
  - Must have permanent storage structure for deicing material (April 2007) and comply with uncovered clean sand set back of 50 feet
  - Implementing SOPs (and regular inspections) for Fueling Operations, Vehicle Maintenance and Good Housekeeping
  - Planning the cessation of the discharge of vehicle wash waters by February 2009
    - The washing of firefighting vehicles has been added as an allowable discharge





# **Deicing Material Storage Structures - Recent NJDEP Interpretation**

Fabric structures must meet the following:

- Designed to withstand at least 110mph winds.
- Covered by a PVC or other similar fire rated material with a min. twenty (20) year warranty.
- Concrete blocks, Jersey barriers or other similar material must be placed around the interior of the structure to protect the sidewalls during loading and unloading
- Must prevent stormwater run-on and run through.
- Must be erected on an impermeable slab.
- Cannot be open-sided.
- Must have a roll-up door or other means of sealing the access way from wind-driven rainfall.

ermanent Structures – At this time, NJDEP recommends bors or other means to prevent exposure to wind driven precipitation.





## Where should you be today?

- Performing Annual Employee Training
  - EJIF Stormwater Training Video October 1 Launch on MEL website www.njmel.org
- Updating and recertifying the Stormwater Pollution Prevention Plan Annually
- Updating the source material inventory and associated BMPs annually
- Submitting Annual Report and Certification ELECTRONICALLY by May 2 of each year





# **Common Problems with Implementation**

- Vehicle Fueling SOP Implementation of Bulk Delivery Requirements
- General Good Housekeeping SOP Regular inspections of DPW yards for source material
- Identification of Municipal Stormwater BMPs and inspection/maintenance of these systems
- Proper Management of Road Waste and
   Wastewaters Generated During Inlet Cleaning





# Looking Forward to the Close of the First Permit Cycle...

- All **ordinances** must be fully adopted and in place
- All new storm drain inlets must be bicycle safe & closed back
- All applicable storm drains must be labeled by 2009
- Map of all stormwater outfalls must be completed by 2009
- Every outfall must have initial illicit connection inspection by 2009.
- Every outfall must have initial **scouring** inspection by 2009.
- Permanent structure for salt. NO TARPING !!
- All required SOPs & source material inventory completed and being implemented
- Must cease uncontrolled municipal vehicle washing by 2009





# A Closer look at the Illicit Connection Elimination Program...

- Illicit Connection Elimination Program
  - What is required by NJDEP?
  - Examples of Illicit Connections?
- Dry Weather Flows & Intermittent Flows
  - Identification
  - Sampling
  - Elimination





# Illicit Connection Program: What is required?

## Illicit Connection Elimination Program:

- Each Tier A Municipality must develop and implement a program to detect and eliminate illicit connections into the Municipality's small MS4. The program, at minimum, must include an initial physical inspection of all its outfall pipes. All outfall pipes that are found to have dry weather flow are to be further investigated.
- Key Words:
  - Dry Weather Flow 3 Days (72 hours) of no precipitation. Inspect Outfall for flow. If flow is present, this is considered a "Dry Weather Flow".
  - If there is staining or evidence of contamination but no flow, this is considered a possible "Intermittent Flow".
  - "Illicit Connection Inspection Report Form" must be completed for each outfall present in the municipality





# Typical Illicit Connections Associated with Public Work Facilities

- Discharges from floor drains and oil/water separators
- Compressor and boiler blowdown
- Unauthorized discharges from secondary containment structures
- Cooling tower bleed off
- Filter backwash water
- Hydrostatic testing water
- Water main disinfection water
- Vehicle/equipment wash waters (Tier A Permit allows until 2/28/2009)
- Construction dewatering
- Plant effluent (requires Beneficial Re-use Permit)





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form	Team Member:									
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	(if the Ammonia to Potassium Ratio is greater than 0.6:1, then it is likely that the pollutant is sanitary sewage)					
	(if the Ammonia to Potassium Ratio is less than or equal to 0.06:1, then the pollutant is from another washwater source.)					
(c)	FLUORIDE:mg/L					
	(if the fluoride levels are between 1.0 and 2.5 mg/L, then the flow is most likely from fluoride treated potable water.)					
	(if the sample tests below a detection limit of 0.1 mg.t. for flouride, it is likely to be from groundwater infiltration, springs or sfearams. In some cases, however, it is possible that the discharge could originate from an onsite well used for industrial cooling water which will test non-detect for both detergents and fluoride. To differentiate between these cooling water discharges and ground water infiltration, you will have to rely on temperature.)					
(d)	TEMPERATURE:°F					
	(if the temperature of the sample is over 70°F, it is most likely cooling water)					
	(if the temperature of the sample is under 70°F, it is most likely from ground water infiltration)					
7.	Is there a suspected illicit connection? Y ( ) N ( )					
	If "YES", what is the suspected source?					
	If "NO", skip to signature block on the bottom of this form.					
8.	Has the investigation of suspected illicit connection been completed? Y ( ) N ( )					
	If "YES", proceed to question #9.					
	If "NO", skip to signature block on the bottom of this form.					
9.	Was the source of the illicit connection found? Y ( ) N ( )					
	If "YES", identify the source:					
	What plan of action will follow to eliminate the illicit connection?					
	Resolution:					
	-					

# **Investigating Dry Weather Flows**











# **Dry weather Flows & Intermittent Flows**

- Submit all completed Illicit Connection Inspection Report Forms with your Annual Report to NJDEP
- If an "intermittent flow" is identified, you must perform, at minimum, three (3) additional investigations in an attempt to identify dry weather flow and investigate the potential illicit connection.
- If an illicit connection cannot be located or is found to emanate from another public entity, Tier A Municipalities must submit to the Department a written explanation detailing the results of the investigation and notify that public entity.
- NJDEP will determine if such measures were adequate and will notify the Tier A Municipality of the determination. All illicit connections found and subject to the ordinance prohibiting illicit connections must be eliminated within six (6) months of the discovery.





# **Signs of Intermittent Flows**

- Staining on the outfall structure
- Deterioration of the outfall structure
- Excess or limited vegetative growth in the immediate vicinity of the outfall





# **Submerged Outfall Structures**

- Inspection of submerged outfalls must be completed. Methods can include:
  - Inspection of the area in the immediate vicinity for signs of flow from the structure
  - Inspection of an upgradient inlets or manholes for signs of dry weather flow
  - Camera the line to confirm presence or absence of flow





# **Dry Weather Flows – Common Characteristics**

Odor / Sewage Sulfur Smells	Smell associated with stale/septic sanitary wastewater. ("rotten eggs"): industries that discharge sulfide compounds or organics (meat packers, canneries, dairies, etc.).					
Oil and Grease	Petroleum refineries or many facilities associated with vehicle maintenance or petroleum product storage.					
Rancid-sour	Food preparation facilities (restaurants, hotels, etc.).					
Color	Important indicator of inappropriate industrial sources. Industrial dry weather discharges may be of any color, but dark colors, such as brown, gray, or black, are most common.					
Yellow	Chemical plants, textile and tanning plants.					
Brown	Meat packers, printing plants, metal works, stone and concrete, fertilizers, and petroleum refining facilities, sediment laden muddy waters					
Red	Sediment laden waters with high Iron content; Meat Packers					
Gray	Dairies, sewage waste.					
Turbidity	Often affected by the degree of gross contamination. Dry weather industrial flows with moderate turbidity can be cloudy, while highly turbid flows can be opaque. High turbidity is often a characteristic of undiluted dry weather industrial discharges.					
Cloudy	Sanitary wastewater, concrete or stone operations, fertilizer facilities, and automotive dealers.					
Opaque	Food processors, lumber mills, metal operations, pigment plants.					
Floatable Matter	A contaminated flow may contain floating solids or liquids directly related to industrial or sanitary wastewater pollution. Floatables of industrial origin may include animal fats, spoiled foods, solvents, sawdust, foams, packing materials, or fuel. Floatables in sanitary wastewater include fecal matter, toilet paper, etc					







# **Investigation Tools**

- Sample collection is not required, but is an example of one tool to help determine the source of a dry weather flow. Other tools include:
  - Camera inspection
  - Smoke Tests
  - Dye Tests
  - Visual inspections
- Once you identify a dry weather flow and you cannot determine the source from upstream visual investigation, sample collection is an option to help differentiate between
  - potable water
  - sanitary waste water
  - groundwater
- Required parameters & common costs per sample if sent to a laboratory
  - MBAS (surfactants) \$60
  - Fluoride \$25
  - Ammonia \$30
  - Potassium \$2
  - (total \$137)





# **Paperwork**

- Illicit connection inspection reports must be submitted to NJDEP with the Annual Report for all outfalls with dry weather or intermittent flows
- Illicit connection inspection reports for outfalls found to be dry, must be retained with the SPPP for NJDEP inspection







#### In the News from NJDEP....

## **Emergency Generators**

- Record Keeping Requirements for EGs 37 kW or greater
  - Record reason for operation, date, start/stop time, total operating time and operator's name
- Check Air Quality Forecast prior to testing and maintenance at

http://www.state.nj.us/dep/aqpp/





#### In the News from NJDEP....

## **Underground Storage Tanks**

New guidance was issued by the USEPA regarding UST Inspections and State Compliance Reporting. The guidance indicates that States had until August 8, 2007 to inspect all USTs for compliance and must re-inspect each regulated tank every 3 years.





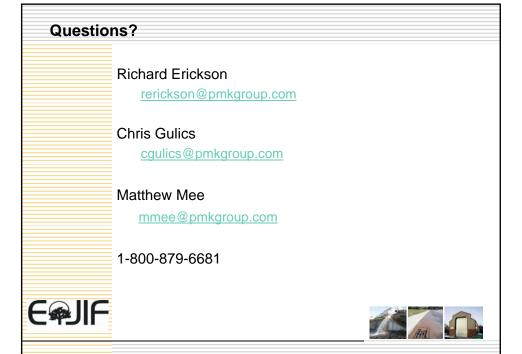
#### In the News from the USEPA....

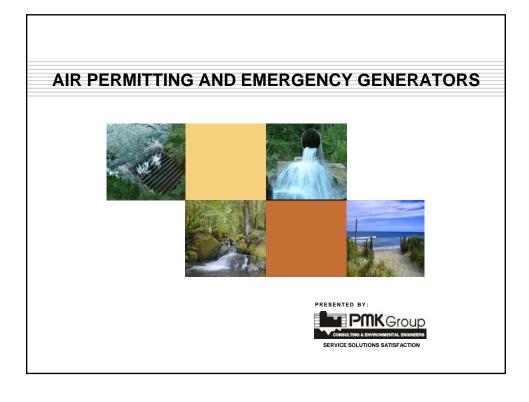
# Spill Prevention Control and Countermeasure

- Effective February 26, 2007: Amendments allow "Qualified Facilities" to self-certify plan without P.E. certification
  - 10,000 gallons or less of aggregate above ground petroleum storage volume
  - · Dependent on spill history at the site









#### **New Emergency Generator Requirements**

- Change #1 November 7, 2005
  - 37 kW and greater must comply with the following record keeping requirements:
    - Record total operating time monthly
    - For each testing/maintenance activity, record the reason for operation, date, start/stop time, total operating time and operator's name
    - Retain voltage reduction notification from PJM Interconnect (if applicable)
    - Retain all records for 5 years
  - Check the Air Quality Forecast Prior to Testing and Maintenance
    - Prior to testing/maintenance, log onto

http://www.state.nj.us/dep/aqpp/

• Click the following link on the left side of the homepage

#### AO Forecast for Emergency Ger

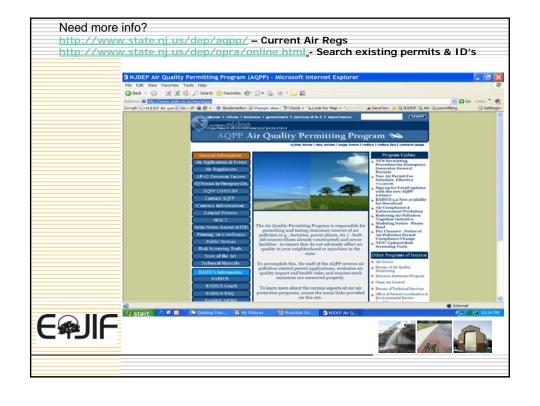
- Testing/maintenance CANNOT be performed if the air quality ANYWHERE IN NJ is Unhealthy for Sensitive Groups, Unhealthy, Very Unhealthy or Hazardous
- Emergency generators can be used for emergencies regardless of air quality



## New Emergency Generator Requirements

- Change #2 January 5, 2007
  - New Revised General Air Permit GP-005
    - A New GP-005 was required to be submitted by March 1, 2007
    - Permits multiple generators at a single facility with a total combined heat input of up to 80 million BTU/hr
    - Facilities with PCP not required to file a new GP-005
    - No fee to re-file by March 1, 2007
    - Failure to submit may result in enforcement action and fees
    - Testing and Maintenance up to a maximum of 100 hrs/yr per unit
    - Does not limit run time hour for emergencies or voltage reduction (if authorized by PJM Interconnect)
    - Air Quality Forecast and recordkeeping requirements are same as Change #1.
    - Diesel generator operators must retain low sulfur (≤2%) certification

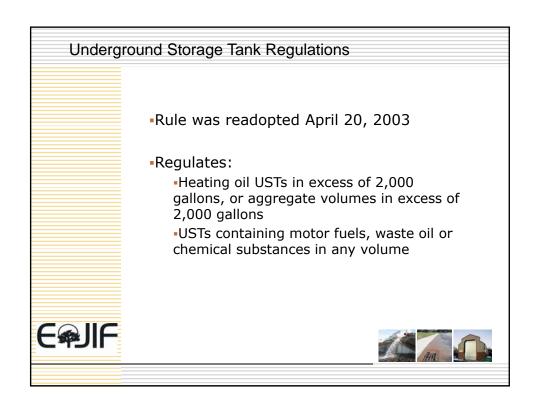








# Underground Storage Tank Regulations N.J.A.C. 7:14B -Applicability -Administrative Requirements -Testing and Inspections



## **Underground Storage Tank Regulations**

- Oil/Water separators are considered a flow through process and not regulated <u>UNLESS</u>
- There is a separate stand-alone underground storage tank for the storage of the oil fraction
  - The storage tank would be regulated as a waste oil storage tank





## Administrative Requirements

- Must be registered with NJDEP UST Facility Questionnaire (USTFQ) and \$100
- USTFQ must be recertified annually and renewed every 3 years with \$100 fee
- Must demonstrate proof of financial responsibility
  - EJIF or other environmental insurance
- USTFQ information must be the same as the Certificate of Insurance





## Construction Requirements

- Regulated USTs must contain:
  - Corrosion protection (tank and piping)
  - Release Detection Monitoring (tank and piping) (excludes emergency generator tanks and European Safe Suction Piping)
  - Spill Prevention
  - Overfill Prevention





## Important Exemptions

- Sumps
  - Defined as a pit or reservoir designed to collect or contain a regulated substance for no more than 48 hours
    - Typically found in emergency decontamination areas, pesticide storage structures
  - Sumps are subject to subsections 2, 3, 4.1(a), 4.1(e) through (I), 4.2, 5.2 through 5.7, 7 and 8
  - In summary, sumps are not applicable to spill and overfill protection, leak detection monitoring, fill port marking





## Important Exemptions



- Emergency Generator USTs
  - Tanks that are part of an emergency generator system used to store motor fuel solely for use by the emergency power generators are exempt from the requirement of subchapter 7:14B-6 (i.e. Release Detection Requirements)
  - NJDEP is reportedly considering amending this section of the rule





## Important Exemptions

- Spill and Overfill Prevention Equipment
  - Tanks filled by transfers of no more than 25 gallons at one time are exempt from having spill buckets and overfill protection devices
  - This typically applies to waste oil collection tanks







### Inspection and Testing Requirements – Leak Detection

- Petroleum USTs

   Monthly leak detection documentation (weekly for manual tank gauging (550 gals. or less))
- Chemical USTs

   Monthly leak detection
- Pressurized Piping
   – automatic line leak detectors and, annual line tightness test or monthly monitoring with an approved method (e.g. vapor/groundwater monitoring, interstitial monitoring)
  - Automatic line leak detectors are also required to be tested annually to ensure proper function
- Suction Piping line tightness test every 3 years or monthly monitoring (e.g. vapor/groundwater monitoring, interstitial monitoring)
- Supply/Return Piping monthly leak detection or tightness test every 3 years and water presence for each delivery
- No monitoring is required for European or Safe Suction Piping where piping is sloped back to tank and one check valve is located as close as possible to the suction pump



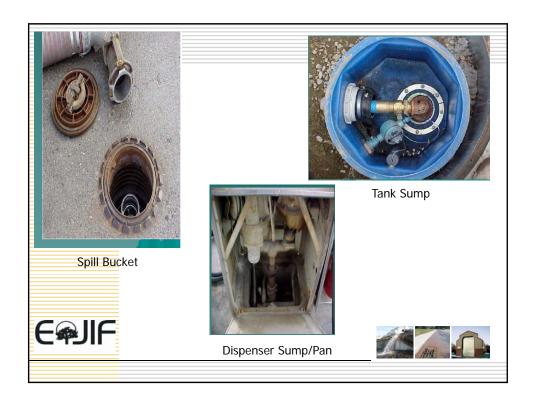


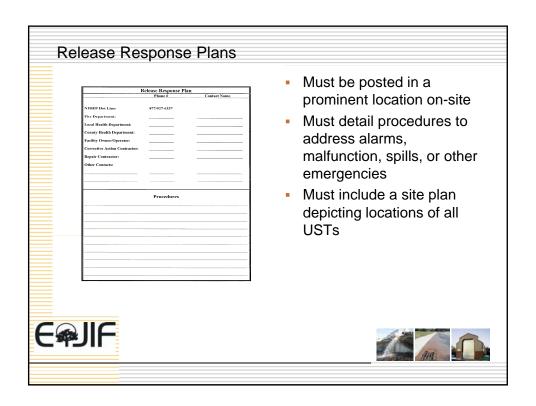
# Inspection and Testing Requirements – Corrosion and Spill Protection

- Corrosion Protection Systems
  - Cathodic Protection Tested 1/3 years
  - Impressed Current Tested 1/3 years and inspected every 60 days
- Spill buckets, sumps and dispenser pans Inspected monthly for liquid, debris and to verify integrity. Spill buckets must also be inspected prior to deliveries
- ALL TESTING MUST BE PERFORMED BY NJDEP CERTIFIED FIRMS AND INDIVIDUALS
- ALL INSPECTIONS MUST BE LOGGED AND KEPT ON-SITE









#### Overfill Protection





- Overfill Prevention Equipment Must:
  - Automatically shut off flow at 95% full; or
  - Restrict flow or trigger a high level alarm at 90% full; or
  - Restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that no fittings above the tank top are exposed to product due to overfilling
- High level alarms must be audible or visible to the fuel delivery personnel while located at the fill port of the UST





#### EJIF UST Insurance Coverage

- UST coverage is not automatic, but conditional
- All recommendations for insurance coverage are issued by PMK Group
- Regulated tanks must comply with N.J.A.C. 7:14B for construction and maintained in accordance with the same
- Non regulated USTs (i.e. heating oil tanks) less than 15 years old are provided coverage, but must be approved by PMK
- Non regulated USTs greater than 15 years old must provide a positive integrity test to PMK and complete annual testing thereafter









# SPILL PREVENTION CONTROL AND COUNTERMEASURE





# Spill Prevention Control and Countermeasure

- Applies to owners or operators of facilities that drill, produce, gather, store, use, process, refine, transfer, distribute, or consume oil and oil products.
- Regulates the aboveground storage of oils in excess of 1,320 gallons stored in containers 55 gallons and greater
- Must have route to navigable waters or ability to migrate off-site





SPCC

## Includes...

- Aboveground Storage Tanks
- Mobile fueling tanks
- Wet Transformers
- Drums
- Generator Sub-base Tanks
- Equipment with Oil Reservoirs (i.e. hydraulic fluid)
- Etc.





**SPCC** 

# E

# Section 112.1(d)(6)—Wastewater Treatment Facility Exemption

... if a wastewater facility or part thereof is used for the purpose of storing oil, then there is no exemption, and its capacity must be counted as part of the storage capacity of the facility... At permitted wastewater treatment facilities, storage capacity includes bulk storage containers, hydraulic equipment associated with the treatment process, containers used to store oil which feed an emergency generator associated with wastewater treatment...





SDCC

## **December 2006 Amendments**

- Effective February 26, 2007
- Streamlines requirements for:
  - "Qualified Facilities" with an oil storage capacity of 10,000 gallons or less
  - Oil Filled operational equipment
  - Mobile Re-Fuelers
- Clarifies Motive Power Containers





# **Qualified Facilities**

- 10,000 gallons or less in aggregate aboveground oil storage, and
- For 3 yrs prior to Plan certification or since becoming subject to rule if operated for less than 3 yrs – MUST NOT HAVE HAD:
  - A single discharge to navigable waters exceeding 1,000 gallons, or
  - Two discharges to navigable waters each exceeding 42 gallons within a 12 mo. period





## **Qualified Facilities**

- May prepare a self certified plan without P.E. certification as long as the plan:
  - Does not deviate from rule
  - Does not use environmental equivalent measures
  - Does not make impractability determinations





# Alternative Integrity Testing Requirements for Qualified Facilities

- Test and inspect ASTs on regular schedule and when repairs are made
- Facilities can determine (in accordance with industry standards):
  - Qualifications for personnel performing testing and inspection
  - Frequency and type of testing and inspections
  - No longer requires both visual inspection and another testing method





# Alternative Security Requirements for Qualified Facilities

- To prevent acts of vandalism and assist in discovery of oil discharges, facilities must describe:
  - Control of access to oil storage areas
  - Prevention of unauthorized access to oil pump starter controls
  - The appropriateness of security lighting



# **Oil Filled Operational Equipment**

- Container must support the operation of the equipment
- Examples include transformers, hydraulic pumps, gear boxes, etc.
- Must meet same eligibility criteria as "Qualified Facilities"
- Can prepare:
  - oil spill contingency plan (avail @ epa.gov/oilspill)
  - written commitment of manpower, equipment and materials to respond to a spill
  - inspection or monitoring program to detect equipment failure or a discharge





## **Mobile Re-Fuelers**

- Bulk storage container onboard a vehicle or towed that is designed or used solely to store and transfer oil
- No longer requires sized secondary containment
- General secondary containment requirements still apply





## **Motive Power Containers**

- Onboard bulk storage container used to power the movement of a motor vehicle
- Exempt from the SPCC Rule
- Transfer of oil to these containers is still an applicable activity





