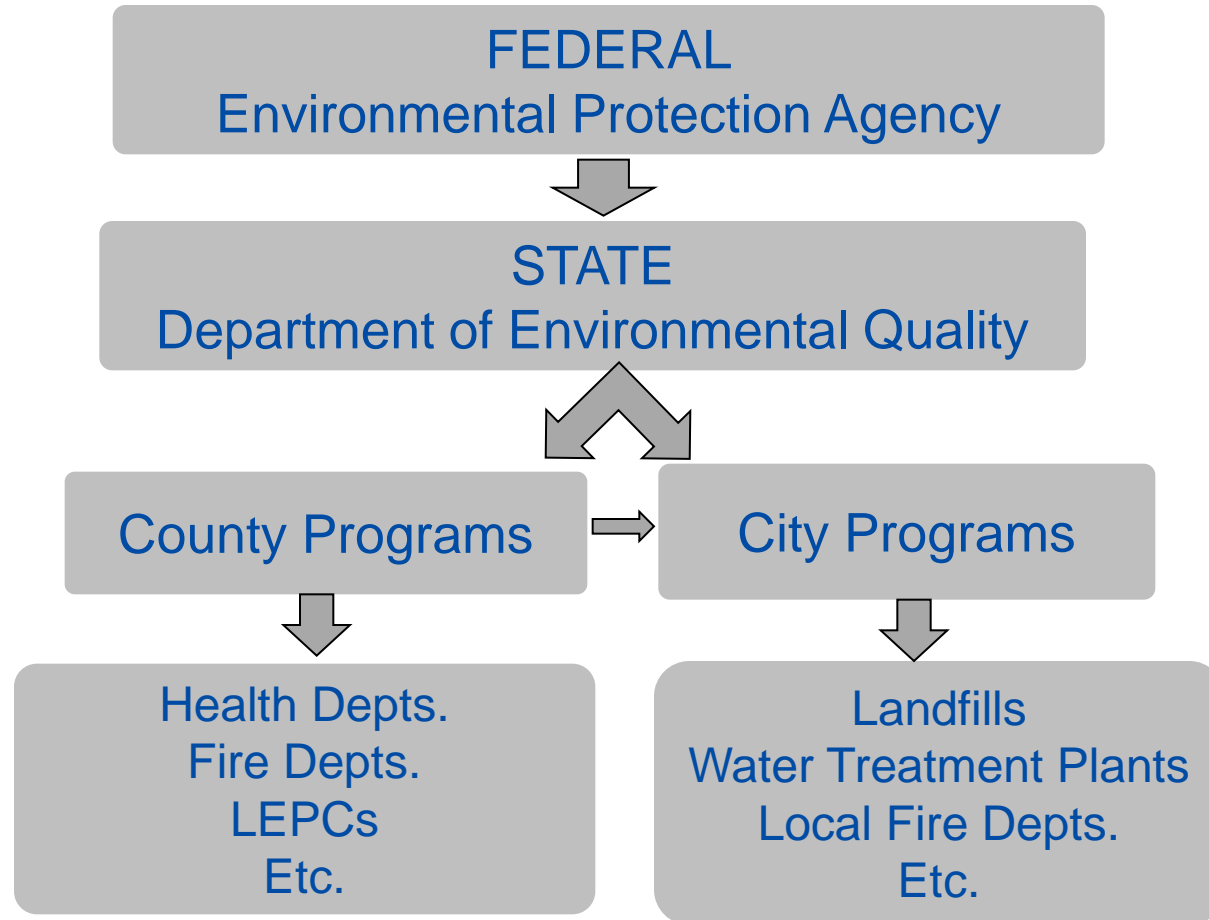


# Environmental 101 for Safety Managers



**EHSICC Annual Conference  
September 2012**

# ***“Trickle Down” Regulatory Authority***



**Always check with state and local authorities for additional requirements.**

## *Emergency Engines (CAA)*

### Y National Emissions Standards for Hazardous Air Pollutants (NESHAP)

- Commercial exclusion for emergency engines at area sources

### Y New Source Performance Standards (NSPS)

#### Y General requirements

- 100 hour limit
- Emissions limitations or manufacturer's certification
- Recordkeeping may be required for runtime and fuel consumption
- Fuel Type Restrictions (% Sulfur)
  - Y Purchase vs use
- Maintenance records

# *Emergency Engines (CAA)*

- Y Pre-construction permit is typically required
- Y Permitting Based on Emissions (potential and actual):
  - Actual Operating Hours
  - Potential to Emit (24 hrs/day - 365 days/year)
  - Fuel Consumption
- Y Non-Road (portable) engines



## ***Boilers (CAA)***

- Y National Emissions Standards for Hazardous Air Pollutants (NESHAP)
  - Rule is under reconsideration
- Y Fuel oil fired boilers, not natural gas or propane fired
  - Under 10 MMBTU
  - Tune up Requirement
  - Initial Notifications
  - Maintain Records of Subsequent Tune ups

## *Other Air Issues*

### Y Vehicles

- Inspection & Maintenance requirements
- Alternative or special formulation fuel requirements

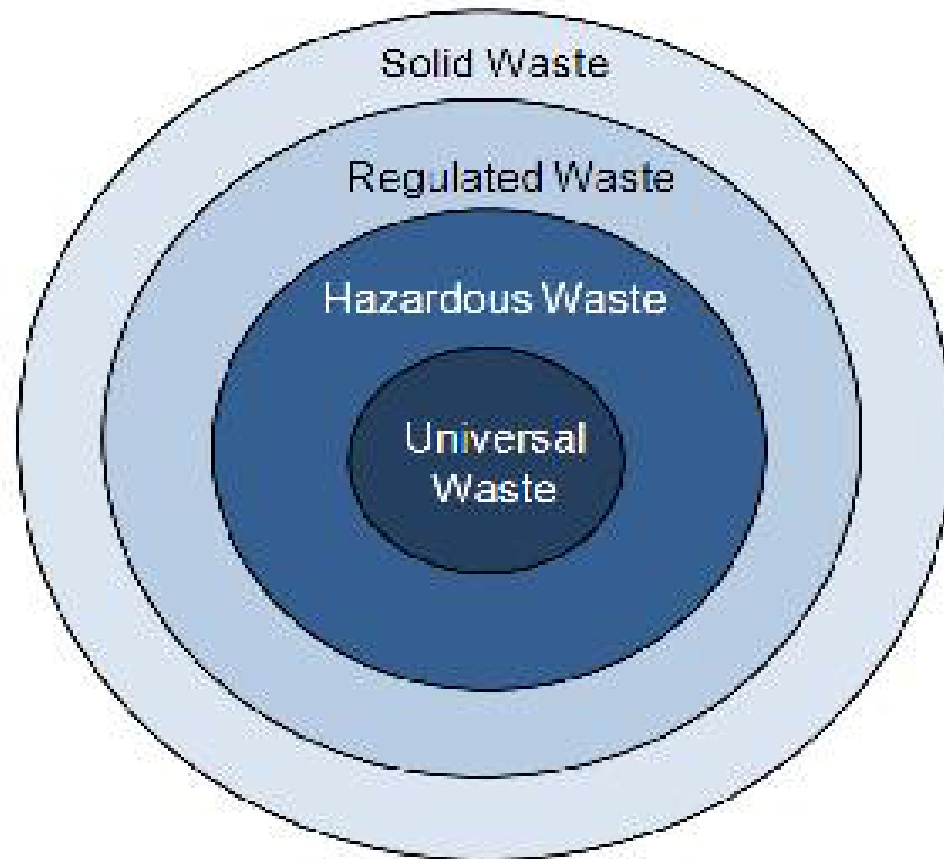
### Y Refrigerant Management

- Registration & certification for recovery equipment and technicians
- Recordkeeping

### Y Greenhouse Gas Emissions

# *Waste Management*

## Types of Waste:



# *Waste Recycling Requirements*

## Y Mandatory Recycling Programs

- Based on State requirements
- Provide recycling
- Reporting

## Y Recycling Electronic Devices

- Based on State requirements
- Covered Electronic Devices (CEDs)
- Manufacturer take back
- Retailer Obligations





# *Hazardous/Regulated Wastes*

## **RCRA Hazardous Waste - 40 CFR 260-263**

- Y Generators of hazardous waste have “**cradle to grave**” responsibility for handling and storage of regulated materials destined for proper waste disposal/recycling management.
- Y **Listed wastes** contain a chemical substance that is specifically listed on one of four lists in the regulations.
- Y **Characteristic wastes** are identified by exhibiting one of the following four characteristics that make them hazardous:

<b>Ignitable</b> – liquid with flash point < 140°F	<b>Corrosive</b> – liquid with pH level of < 2 or ≥ 12.5
<b>Reactive</b> – will spontaneously combust when mixed with water, air, etc.	<b>Toxic</b> – when tested shows levels of certain chemicals or metals at or above allowable limits.

# *Hazardous/Regulated Wastes*

## **Universal Waste – 40 CFR 273**

Y A special category of Hazardous Wastes, which are commonly generated by both small and large businesses. Less stringent regulatory controls were designed to offer incentives for:

- Reduced amounts of hazardous waste in the municipal waste stream, and
- Encouraged recycling and proper disposal



# Potential Waste Streams

## Hazardous Waste

- Battery acid
- Some Solvents
- Waste Containing Lead (lead sheathed cable, batteries)
- Mercury (Mercury relays in switching equipment)

## Universal Waste


- Batteries (Ni-Cd, Lithium Ion, Lead Acid, Cadmium)
- Fluorescent Lamps
- Thermostats (containing mercury components)
- Pesticides

## Used Oil

- Generators
- HVAC Equipment
- Fleet Operations, etc.

## Toxic Waste (TSCA)

- Asbestos (Floor Tile, Ceiling Tile, Thermal Pipe Insulation)
- Polychlorinated Biphenyls (Light Ballasts, Transformers)

 **NOTE:** These are common regulated wastes found in our operations. The list is not intended to be all inclusive. Individual site inventories should be conducted to verify waste stream types and regulatory status.

# *Underground Storage Tanks (RCRA)*

Y Requirements apply to underground tanks and piping connected to the tank storing either petroleum or certain hazardous chemicals.

- State Registration with Annual Tank Fees
- Certification of Proper Installation
- Corrosion Protection
- Spill and Overfill Protection
- Release Detection Method
- On-Site Documentation and Recordkeeping
- Subject to Agency Inspections
- Designated Operator – August 8, 2012



# ***Aboveground Storage Tanks (OPA) Spill Prevention Control and Countermeasures***

- ÿ Regulates oil and oil products with implementation of a spill plan to prevent any discharge of oil into navigable waters or adjoining shorelines of the United States.
  
- ÿ Three Key Criteria a Facility Must Meet to be Regulated:
  - >1,320 gallons total capacity of oil/petroleum on site
    - ÿ All containers 55 gallons and larger are included in amount.
  - Non-transportation related
  - Reasonable expectation of a discharge to waters or adjoining shorelines of the United States.

# ***Spill Prevention Control & Countermeasures Plan***

## **The SPCC must include:**

- ÿ System Description
- ÿ Spill History
- ÿ Spill Potential
- ÿ Containment Description
- ÿ Facility Description
- ÿ Tank/Piping Description
- ÿ Monitoring Description
- ÿ Tank Loading Operations
- ÿ Inspection & Records
- ÿ Security
- ÿ Training
- ÿ Spill Response Plan
- ÿ Plan Amendments
- ÿ Certification

- Plan must be certified
- Plan must be implemented prior to beginning operations
- Periodic inspections required including a Plan review every 5 years
- Update as required

# ***Spills and Hazardous Substance Releases (CERCLA, SARA, RCRA, CWA, DOT)***

- Y Spills of hazardous substances require prompt actions to prevent material from entering or impacting drains, soils, surface water, groundwater or other environmentally-sensitive areas.
- Y Reportable quantities, notifications and reporting requirements differ based on the category of chemical, media of contamination and regulatory authority.
  - List of Lists <http://www.epa.gov/emergencies/tools.htm#lol>
- Y The best place to begin in reporting a spill is with local authorities.
- Y Plan ahead and develop a process for spill response and reporting.

# *Batteries, Fuel, etc. (EPCRA)*

ÿ Establishes a program to inform the public about actual and potential releases of hazardous and toxic chemicals. Reporting requirements apply to facilities that use, process or store specific chemicals over specified quantities.

ÿ Four Major Provisions or Sub-Sections:

- Emergency Planning (301-303)
- Emergency Release Notification (304)
- Hazardous Chemical Reporting (311-312)
  - ÿ Tier II Reports
- Toxic Release Inventory Reporting (313)
  - ÿ Form R Reports





# *Batteries, Fuel, etc. (EPCRA)*

## Emergency Planning (Section 301-303)

- Y A facility with an Extremely Hazardous Substance (EHS) that exceeds Threshold Planning Quantity (TPQ) must notify below agencies within 60 days of becoming subject to the requirements:
  - State Emergency Response Commission (SERC)
  - Local Emergency Planning Committee (LEPC)
  
- Y Sulfuric Acid is classified by EPA as an EHS.
- Y TPQ for Sulfuric Acid = 1,000 pounds.
- Y One Time Notification originally effective May 17, 1989.

# *Batteries, Fuel, etc. (EPCRA)*

## **Emergency Release Notification (Section 304)**

Y If an accidental release occurs, depending on quantity release, immediate notification must be made to the agencies below:

- State Emergency Response Commission (SERC)
- Local Emergency Planning Committee (LEPC)
- National Response Center (if CERCLA Hazardous Substance released)

## Y Reporting Responsibilities

- >1000 Substances with Reportable Quantity (RQ) ranging from 1-5,000 lbs (See the Consolidated List of Chemicals link aka “List of Lists” to determine your RQ)

# *Batteries, Fuel, etc. (EPCRA)*

## **Hazardous Chemical Storage Reporting (Section 311-312)**

ÿ **One time submittal of Material Safety Data Sheet (MSDS)** or list of chemicals within 3 months of coverage to SERC, LEPC & local fire department.

*(NOTE: EPA encourages submission of lists of chemicals instead of MSDSs.)*

ÿ **Annual submittal of Tier I or Tier II form** - Applies to facilities with hazardous chemicals or an EHS at or above minimum threshold levels. Reports are submitted to SERC, LEPC & local fire department.

**(\$\$ - Filing fees apply for some SERCs/LEPCs/Fire Departments.)**

ÿ **Reporting Thresholds**

- 500 lbs. or the TPQ, whichever is lower for EHS (Ex: Sulfuric Acid)
- 10,000 lbs. for other hazardous chemicals

*(NOTE: Some states may have lower reporting thresholds than the federal requirements. Be sure to check with regulators in each area.)*

# *Batteries, Fuel, etc. (EPCRA)*

## Commonly Reported Chemicals:

### Y Batteries

Sulfuric Acid = 500 pounds

### Y Fuel Tanks (Generators, In-house Fueling Stations, etc.)

Diesel Fuel = 10,000 pounds (approx. 1,350 gallons)

Gasoline = 10,000 pounds (approx. 1,500 gallons)

Propane = 10,000 pounds (approx. 2,380 gallons)

### Y Broad criteria of listed chemicals includes any chemical for which an MSDS is required.

A complete list of EHSs / TPQs can be found in:

– 40 CFR 355 Appendix A & B

# *Potable Water and Water Discharges (SDWA, OSHA, CWA)*

## **Y Drinking / Potable Water Supply**

- Purveyed Water (purchased from supplier)
- Well Water

## **Y Regulated Water Discharges**

- Facility Discharges
- Manhole/Utility Vault Discharges
- Stormwater from Land-disturbing Construction Activity

## *Potable Water (SDWA)*

- **Potable water** – meets primary quality standards in the Safe Drinking Water Act and is approved for human consumption
- **Non-potable water** – does not meet primary quality standards in the Safe Drinking Water Act and is not suitable for human consumption



## *Potable Water (OSHA)*

- 29 CFR 1910.141(b)(1), requires employers to provide potable water for drinking, washing of persons, cooking, washing of foods, washing of cooking or eating utensils, washing of food preparation or processing areas, and personal service rooms.
- 29 CFR 1910.141(d)(2), requires that lavatories shall be made available and that each lavatory shall be provided with hot and cold running potable water, or tepid running potable water.
- Applicable only to staffed facilities

## *Sources of Potable Water*

• **Purveyed water** – potable water distributed or dispensed by a municipality or water company

• **Private wells –**

– **Private wells subject SDWA**

• utilize well water

• regularly have 25 or more occupants that report to the facility at least six (6) months out of the year, and

• required to have a permit and associated recordkeeping

– **Systems supporting fewer occupants not subject to SDWA permitting**



## ***Responding to Compromised Potable Water Supply***

- 29 CFR 1910.141(b)(2) requires Non-potable water outlets be posted or marked in a manner clearly indicating that the water is unsafe and not to be used for drinking, washing of persons, ...
- Companies must:
  - Post applicable notifications
  - Provide alternate source of drinking water
  - Provide mechanism for handwashing
  - Ensure system decontamination, as required
  - Notify occupants when condition resolved

# *Facility Water Discharges (CWA)*

- Cooling Tower & Boiler Blowdown
- Sump Pumps
- Vehicle Washing
- Oil/Water Separators or Clarifiers
- Sanitary Wastewater

# *Facility Water Discharges (CWA)*

## Y Discharge Options:

- Sanitary Sewer to POTW

- Septic System

  - Y Requires maintenance

- Privately Owned Wastewater Treatment Plant

  - Y Generally require operating license and compliance with operator requirements

- Storm Sewer

- Ground or Surface Water

## Y All require permit or prior authorizations

# *Manhole/Utility Vault Dewatering (CWA)*

- Manholes are not water tight!
- Dewatering is routinely required to perform work safely
- Two options for dewatering
  - Discharge to the surface
  - Removal, containerization and disposal



# *Manhole/Utility Vault Dewatering (CWA)*

## Y Best Management Practices

- Evaluation prior to pumping
- Clearing discharge path
- Minimizing the disturbance of any bottom sediment

## Y Some Jurisdictions require additional measures

- Field pH testing
- Filter Socks
- Observation and Discharge Logs
- Periodic Sampling



# *Manhole/Utility Vault Dewatering (CWA)*

## Y Jurisdictions\* with Manhole Dewatering Permits or Related Requirements

- California
- Colorado
- Florida (Miami Dade County)
- Michigan (in MI DOT ROW and Wayne, Oakland and Macomb Counties)
- Nevada

\* Not an all inclusive list

# ***Land Disturbing Construction Activities (CWA)***

Y EPA regulates stormwater runoff from construction activity

Y Activities triggering these requirements:

- building construction (1 acre);
- linear construction projects, such as installing or moving buried cable conduit (1 acre = ~ 1 mile x 8 ft.)
- other soil disturbance, including repairs that require digging or trenching



# *Land Disturbing Construction Activities (CWA)*

## Y Compliance Requirements

- Determine if planned project is subject to NPDES permitting, SWPPP development or other local requirements
- Submit NOI, develop site specific SWPPP
- Comply with permit / SWPPP
  - Site inspections
  - BMP Implementation
- Submit NOT
- Documentation and Recordkeeping





# ***Real Estate Transactions Environmental Site Assessments (Due Diligence - ASTM Standard E 1527-05)***

Y The purpose of an ESA is to look for environmental contamination concerns before buying or otherwise taking an interest in real estate. The “Phase I” ESA includes:

- A visual inspection of the property
- Review of historical records of property use
- Inquiry interviews with regulatory agencies and other personnel
- A government records search regarding whether environmental contamination exists on the property or nearby.

Y **\$\$ - Approximate Cost for a Phase I: \$1,500 - \$5,000 per site.**

# *Real Estate Transactions Environmental Site Assessments*

- Y Negative results from a Phase I, may at the buyer's discretion, move the ESA to Phase II.
- Y A Phase II involves sampling soil and/or ground water to look for existing contamination, and may include additional research into the property history.



# Questions?

