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Hazardous Waste Inspectors
Michigan Department of Environmental Quality
Before We Get Started ...
“Subparts AA, BB, and CC are one of EPA’s top enforcement priorities.”
McCoy, June 13, 2016
National Enforcement Initiative: Cutting Hazardous Air Pollutants

Goal
EPA has worked to identify and address illegal and excess emissions of toxic air pollutants from leaks and flares at facilities that have a significant impact on air quality and health in communities since this initiative began in 2004.

EPA will continue to implement this initiative in fiscal years 2017-19, and expand it to include addressing air emissions from large product storage tanks and hazardous waste generator and treatment, storage and disposal facilities. In doing so, EPA will focus on identifying and addressing violations of leak detection and repair requirements for product storage tanks, and hazardous waste tanks, surface impoundments, or containers, as well as from related hazardous waste treatment equipment.

Progress on Cutting Hazardous Air Pollutants
If you sometimes feel confused concerning Subparts AA, BB, and CC, you most certainly are not alone.
“Now in my 20th year at the MDEQ, I have worked in a number of program areas (land, water, air and waste). I hold a Master’s degree in Environmental Studies from Eastern Michigan University and a Bachelor’s degree in Geology from The Ohio State University. I currently work out of the Southeast Michigan District Office in Warren.” J. Day

“I’ve been with the MDEQ since 2004. My current inspection subject matter includes Used Oil, Hazardous Waste, Liquid Industrial Byproduct, Universal Waste, and Scrap Tires. I work out of the Grand Rapids District Office. The doctrine I preach is that everyone must characterize, then subsequently manage each waste stream properly.” W. O'Boyle
Presentation Topics

• OEAS Overview
• 40 CFR §§ 264/265, Subparts AA, BB, CC
• 40 CFR §261, Subparts AA, BB, CC
• Subpart AA - Performance Testing
• Subpart BB - Method 21 Monitoring
• Subpart CC - VO Determinations
• CAA Overlap Provisions
• Additional Training and Resources
• Questions
• Take Home Points
OAES Overview

• Organic Air Emission Standards (OAES) were designed to encourage routine facility maintenance
• They fulfill the remaining directive of RCRA to address air emissions
• They fill in the loopholes and provide protection where the CAA and CWA could not because of these key RCRA attributes:
  – Risk based as opposed to technology based
  – Unit-specific – no averaging, trigger volumes
  – On, all the time
  – *Recycling & secondary hazardous materials in remanufacturing, are regulated*
RCRA Air Risks

• Releases of toxic, corrosive and/or ignitable HW can result in exposure to:
  ▪ Onsite workers
  ▪ Nearby communities
  ▪ Harm to the environment

• Potential for increased fire or explosion risk

• Volatile organic air emissions contribute to ground level ozone formation

• Potential fines and penalties
OEAS Applicability

- Hazardous waste Treatment, Storage and Disposal Facilities (TSDFs) subject to 40 CFR Part 270
  - Permitted and interim status
- Recycling units at hazardous waste management facilities otherwise subject to permitting standards
- Large Quantity Generators (LQG) less-than-90-day accumulation tanks and containers

Note also the applicability of tanks and containers managing hazardous secondary materials under the remanufacturing exclusion at 40 CFR Part 261.4(a)(27)
### OAES Subject Equipment/Units

<table>
<thead>
<tr>
<th>Subpart</th>
<th>Equipment/Units Covered</th>
<th>Waste Threshold Concentration/Leak Definition</th>
</tr>
</thead>
</table>
| AA      | Certain process vents                                       | ≥ 10 ppmw TOC  
* design standards - no leak definition                                                                 |
| BB      | Equipment leaks for equipment in contact with hazardous waste stream | ≥ 10 % by weight or (100,000 ppmw) TOC  
* visual or 10,000 ppm defines a leak  
(500 ppm above background for pressure relief devices and “no detectable emissions” equipment) |
| CC      | Tanks, containers, and surface impoundments                 | ≥ 500 ppmw average VOC at “point of origination”  
* design standards - no leak definition                                                                 |
Subject Processes/ Devices

• Subpart AA
  – Distillation, fractionation, thin-film evaporation, solvent extraction and air or steam stripping units

• Subpart BB
  – Pumps, compressors, pressure relief devices, sampling connecting systems, open-ended valves or lines, valves, flanges and other connectors

• Subpart CC
  – Tanks, containers and surface impoundments
Process Vent Definition

- Any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or a tank associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, air stripping or steam stripping operations.

- Closed vent systems and control devices must meet the requirements of Subpart AA standards for closed-vent systems and control devices.

- Performance tests and engineering calculations.
Process Vents

- Applies to certain Treatment Storage and Disposal (TSD) Facility and Large Quantity Generator (LQG) processes:
  - Distillation
  - Fractionation
  - Thin-film evaporation
  - Solvent extraction
  - Air or steam stripping

- Again, units that manage hazardous wastes with (total) organic concentrations of at least 10 parts per million by weight (ppmw)

Note again – BB and CC refer back to AA regarding control device standards
The feed tank vent, bottoms and accumulator tanks’ vents and condenser process vent, above, would be subject to Subpart AA control of their process vent emissions.
Emissions Control Requirements

• Reduce total organic emissions from **ALL** affected process vents below 3 lb/h and 3.1 tons/yr or use unit-specific control devices to reduce the total organic emissions by 95 percent by weight
  
  – Engineering calculations or performance tests must be used to determine compliance
  

• If the facility chooses to use a control device, Subpart AA specifies closed-vent system and control device performance, monitoring, and repair requirements

• If a closed-vent system to a control device is used, the closed-vent system and control device must be operating at all times when emissions may be vented to it
Control Devices

- Condenser
- Adsorber (Regenerating)
- Adsorber (Non-regenerating)
- Industrial Boiler
- Process Heater
- Catalytic Vapor Incinerator
- Thermal Vapor Incinerator
- Flare
Monitoring and Inspection

• Each control device must have installed and operating
  – A flow indicator device that records at least once per hour
  – A monitoring device to continuously monitor the control device’s operation
    • The monitoring device required to be used to monitor the process vent is control device-dependent
      – A monitor installed, calibrated, maintained, and operated in accordance with manufacturer’s specifications
• The facility must inspect monitoring records at least once each operating day
  – If control device inspection indicates a problem, the facility must immediately implement corrective action and record the resolution of the problem in the operating records
  – Closed vent systems must be monitored annually; detectable emissions controlled as soon as practicable, but not later than 15 days
Subpart BB: Equipment Standards
Subject Equipment

- Equipment that contacts hazardous waste streams containing at least 10% total organic concentrations by weight

- Specific requirements are detailed for:
  - Pumps
  - Compressors
  - Pressure relief devices
  - Sampling connecting systems
  - Open-ended valves or lines
  - Valves
  - Flanges and other connectors

- Each piece of equipment must tagged w/ unique ID
Subject Equipment

- Again, each piece of equipment must be tagged with a unique ID.
Exemptions

• Equipment which contains or contacts hazardous waste less than 300 hours per year

• Equipment in vacuum service
Pumps in Light Liquid Service

- Visually inspect weekly for indication of liquids dripping from pump seal
- Monitored monthly to detect leaks
Compressors

- Must be equipped with a seal system with a barrier fluid system
- Seal system operation and performance requirements are specified in the CFR
- Barrier fluid must not be a hazardous waste with organic concentration of 10 percent by weight or greater
- Sensor detected failure of seal system, barrier fluid system, or both equals a leak
- Daily/monthly check of sensor and leak repair requirements
Pressure Release Devices in Gas/Vapor Service

- Operated with no detectable emissions (less than 500 ppm above background) except during pressure releases.
- Returned to no detectable emissions (to be monitored and confirmed within five days) after each pressure release.
- Repair requirements when a leak is detected.

![Image of pressure release device](image-url)
Conservation Vents

• Review the manufacturer’s design specifications for the Level 1 tank that has a conservation vent and the conservation vent’s manufacturer specified set point. Tank design specs include the maximum working pressure.

• The conservation vent set point (i.e., pressure at which the conservation vent will open) should not be less than the maximum working design pressure of the tank.

• The vacuum pressure of the conservation vent should not be less than the Level 1 tank’s working vacuum pressure.
Sampling Connections

- Must be equipped with a closed-purge, closed-loop, or closed-vent system
- In-situ or no-purge sampling systems are exempt
- Some operational requirements on purge return
Open-ended Valves or Lines

- Can’t have open ended lines
- Must be equipped with cap, blind flange, plug or second valve
- Operational requirements for second valves and double-block-and-bleed systems are specified
Valves in gas/vapor or light liquid service

- Monthly monitoring by methods specified in 40 CFR 264.1063 (i.e.: Method 21). An instrument reading of 10,000 ppm or greater indicates a leak.
Valves in gas/vapor or light liquid service

• First attempt to repair the leak will be conducted as soon as practicable, no later than 5 calendar days after each leak is detected. Leak repaired no later than 15 calendar days after detection, except as provided in 40 CFR 264.1059

• Valve is exempt from monthly if designated to operate with ‘no detectable emissions’ (then it is tested annually)

• Special requirements for valves unsafe to monitor and difficult to monitor
Equipment in Heavy Liquid Service

- Heavy service pumps and valves, light and heavy liquid service pressure relief devices and flanges and connectors
- Visual, audible, olfactory or other leak detection monitoring required
- Should be monitored concurrent with tank/ HWMU inspections for efficiency
- Repair requirements 1st attempt within 5 days/ repaired within 15 days

*Note: Inaccessible or ceramic/ceramic-lined connectors are exempt.*
Repair Requirements

• Leak must be repaired as soon as practicable, but no later than 15 calendar days after detected.

• First attempt at a repair shall be made no later than 5 calendar days after detected.

• Delays in repair beyond 15 days, must be documented and reported semi-annually.
Recordkeeping Requirements

- Equipment identification numbers
- Associated HWMU identification
- Location of equipment on the HWMU
- Type of equipment
- Waste state and percent-by-weight total organics in waste stream contacting the piece of equipment
- Method of compliance with CFR (e.g.: dual mechanical seals, monthly leak detection and repair, etc.)

Note: This information may be recorded with other similar records for CAA compliance and with RCRA tank, HWMU or container inspection records
Leak Tagging

When a leak is detected, each piece of leaking equipment must have:

- **Leak Tagging**: Equipment shall be identified with additional weatherproof visible ID as a leaker, with the date of leak detection.
Recordkeeping for Leaks and Repairs

- Instrument, operator, and equipment identification number
- Cause and hazardous waste leaking
- Dates and method of repair
- Permanent record separate from leak tag

Note: First attempt to repair the leak will be conducted as soon as practicable, no later than 5 calendar days after each leak is detected. Leak repaired no later than 15 calendar days after detection, except as provided in 40 CFR 264.1059.
Reporting Requirements

• Semi-annual report to the Administrator for:
  – Valve, pump, or compressor leaks not repaired as required
  – Hazardous Waste Management Unit (HWMU) shutdowns
  – Control device exceedances
    • When, what, how long, repair date, cause & repair information
  – Report is not required if identified leaking equipment repaired as required and no exceedances occur
Tanks, Surface Impoundments and Containers

Circa 1935 Chemical Plant in New Jersey.
Subpart CC Applicability

- Affected units are containers, tanks, surface impoundments, and miscellaneous units which are:
  - Subject to permit (Part 264), interim status (Part 265) or less-than-90-day large quantity generator (Part 262) standards
  - Not expressly exempted from the standards

- Subpart CC requires organic emission controls on affected units, unless the average Volatile Organic (VO) concentration of hazardous waste managed in unit is $< 500 \text{ ppmw at point of waste origination}$
Exclusions

- Wastewater treatment units
- Elementary neutralization units
- Emergency/spill management units
- Totally enclosed treatment facilities
- Hazardous waste recycling units (unless other permitted units)
- Small quantity generators
- Conditionally exempt small quantity generators
- Satellite accumulation units
- Containers less than 0.1 cubic meters (e.g.: 27 gallons)
- RCRA empty containers
- Certified compliance with 40 CFR 60, 61, 63 of CAA
Control Requirements for Tanks
Tank Control Requirements

- Two levels of air emission controls for tanks containing hazardous waste which have volatile organic (V0) concentration $\geq 500$ ppmw at point of waste generation.
- Level of compliance is dependent on the volume of the tank and the projected highest vapor pressure of the waste at normal atmospheric conditions:
  - Level 1 (being less extensive controls)
  - Level 2 (being more extensive controls)
# Applicable Level of Control for Tanks

**Table 1. Determination of Applicable Level of Control for Tanks Containing Hazardous Waste Subject to the Subpart CC Regulations**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>&lt;75 m³ (20,000 gal)</td>
<td>≤76.6 kPa (11.1 psi)</td>
<td>Yes</td>
<td>Tank Level 2 Controls</td>
</tr>
<tr>
<td></td>
<td>&gt;76.6 kPa</td>
<td>No</td>
<td>Tank Level 1 Controls</td>
</tr>
<tr>
<td>≥75 m³ (20,000 gal)</td>
<td>≤27.6 kPa (4.0 psi)</td>
<td>Yes</td>
<td>Tank Level 2 Controls</td>
</tr>
<tr>
<td>and &lt;151 m³ (40,000 gal)</td>
<td></td>
<td>No</td>
<td>Tank Level 1 Controls</td>
</tr>
<tr>
<td>≥151 m³ (40,000 gal)</td>
<td>≤5.2 kPa (0.75 psi)</td>
<td>Yes</td>
<td>Tank Level 2 Controls</td>
</tr>
<tr>
<td></td>
<td>&gt;5.2 kPa</td>
<td>No</td>
<td>Tank Level 1 Controls</td>
</tr>
</tbody>
</table>
Level 1 Tank Controls

Tank must meet ALL three conditions to qualify to use Tank Level 1 controls (i.e., fixed roof):

- Maximum organic vapor pressure of waste is less than tank design capacity for the maximum organic vapor pressure of the worst case hazardous waste managed
- Contents are not heated to temperatures above the temperature of vapor pressure determination
- No waste stabilization done in the tank
Typical Fixed-Roof Tank

Figure 7.1-1. Typical fixed-roof tank.
Fixed Roof Tanks

- Fixed roof is stationary (doesn’t fluctuate with the level of material in tank)
  - An integral part of the structural design, or
  - May separate from rest of tank (e.g., removable top on a vertical tank)
- Fixed roof openings can be equipped with:
  - Closure devices if no visible cracks, holes, gaps or other open spaces when secured in closed position
  - Permanent openings if vented to an organic emission control device
  - Pressure relief devices (e.g., conservation vent) that are vented to atmosphere if set point is appropriate for tank design pressure limits
Level 2 Controls

- Tanks that hold waste exceeding the Level 1 criteria (or that cannot be proved otherwise) are required to use Level 2 controls (.1084(a)(2))

- Five design options allowed for Level 2 Tank Controls
  - Cover vented to control device
  - Pressure tank
  - Tank inside enclosure which is vented to combustion control device
  - Fixed roof with internal floating roof
  - External floating roof

Covered Level 2 Tank vented to control device.
Waste Transfer

• Transfer of hazardous waste among Level 2 tanks and surface impoundments subject to Subpart CC, must be conducted using hard-piping or other closed system that does not allow exposure of the waste to the atmosphere.

• An individual drain system meeting the requirements of 40 CFR §63, Subpart RR is considered a closed system.
Surface Impoundment Controls

- Floating membrane cover or,
- Cover and vent to a control device

Note: Subpart CC controls are not required if the following can be demonstrated:

- Waste placed in unit has average VO concentration < 500 ppmw at the point of waste origination (i.e., before mixing or diluting with other waste streams), or,
- Waste placed in unit has been treated to meet LDRs for organics or by one of the treatment alternatives specified in the rule, or,
- Unit is used for biological waste treatment (meeting requirements for biological treatment alternative)
Container Controls
Container Standards

• Less than 26.4 gallons are exempt

• Level 1
  – Less than or equal to 122 gallons, or
  – Larger than 122 gal \textbf{AND} do not manage hazardous waste in light material service

• Level 2
  – Larger than 122 gal \textbf{AND} manages hazardous waste in light material service

• Level 3
  – Larger than 0.1 m$^3$ (26.4 gallons) \textbf{AND} treat hazardous waste by a stabilization process
# Container Controls

## Table 2

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.1 m³ (26 gal)</td>
<td>NA</td>
<td>NA</td>
<td>Container is Exempt from Air Emission Standards</td>
</tr>
<tr>
<td>≥0.1 m³ (26 gal) and &lt;0.46 m³ (119 gal)</td>
<td>Yes</td>
<td>Yes</td>
<td>Container Level 3 Controls</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>Container Level 1 Controls</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Container Level 3 Controls</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Container Level 1 Controls</td>
</tr>
<tr>
<td>≥0.46 m³ (119 gal)</td>
<td>Yes</td>
<td>Yes</td>
<td>Container Level 3 Controls</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>Container Level 1 Controls</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Container Level 3 Controls</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Container Level 2 Controls</td>
</tr>
</tbody>
</table>
Level 1 Controls

• Three control alternatives:
  – Use container that meets DOT regulations
  – Use a tight-fitting cover on the container and ensure there are no visible gaps
  – Use organic vapor suppression barrier on or above the hazardous waste in the container

• May use conservation vents or safety device if normally closed

• No waste transfer requirements (close container when transfer complete)
DOT Container Standards

• In Department of Transportation (DOT) hazardous materials (HazMat) regulations, waste makeup or constituents all have specified DOT containers in which the waste is allowed to be stored and transported.

• Each approved container for a specific waste has been tested in a multi-test procedure by DOT.

• Approved containers for specific waste constituents can be found tabulated in 49 CFR Part 172.

• The DOT code for the container is embossed in the container’s construction.
Level 2 Controls and Transfers

Three control alternatives

- Use container that meets DOT regulations
- Use container that operates with no detectable organic emissions as tested using Method 21
- Use container that is demonstrated to be vapor-tight within the last 12 months using Method 27

Transfer waste to minimize exposure of waste to atmosphere

- Submerged fill pipe, vapor recovery system, fitted opening with a line purge
Splash Loading Not Allowed
Level 3 Controls

- Two control alternatives
  - Vent container directly through a closed-vent system to a control device
  - Container inside an enclosure which is exhausted through a closed-vent to a combustion control device (e.g.: RTO)

- Transfer requirements same as Level 2

- Standard specifies design and operating criteria for venting vapors directly to a control device
Level 3 Enclosures

- Enclosures must meet the design and operating criteria specified in “Procedure T Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR §52.741
Hazardous Secondary Materials

- **Subpart AA—Air Emission Standards for Process Vents**
- **§ 261.1030  Applicability.**
- The regulations in this subpart apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operations that manage *hazardous secondary materials* excluded under the remanufacturing exclusion at §261.4(a)(27) with concentrations of at least 10 ppmw, unless the process vents are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.
Hazardous Secondary Materials

- **Subpart BB—Air Emission Standards for Equipment Leaks**
- **§ 261.1050 Applicability.**
- (a) The regulations in this subpart apply to equipment that contains *hazardous secondary materials* excluded under the remanufacturing exclusion at § 261.4(a)(27), unless the equipment operations are subject to the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.
Hazardous Secondary Materials

- **Subpart CC—Air Emission Standards for Tanks and Containers**

- **§ 261.1080 Applicability.**

- (a) The regulations in this subpart apply to tanks and containers that contain *hazardous secondary materials* excluded under the remanufacturing exclusion at § 261.4(a)(27), unless the tanks and containers are equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulations codified under 40 CFR part 60, part 61, or part 63.
Performance Tests

- **Subpart AA** performance tests to show compliance with total organic emissions reduction requirements and with toc concentration limit following test methods and run criteria.

- To show a process vent is not subject using direct measurement, knowledge.

- Initial determination that annual time-weighted average TOC of waste is less than 10 ppmw.
“Non-subject” Determinations

• Confirming that distillation, fractionalization, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted annual average TOC concentrations less than 10 ppmw

• Effective date when facility becomes “subject” or when subject waste is first processed

• Annually for continuously generated waste

• Whenever there is a change in waste being managed or a change in the process that generates or treats the waste

• Direct measurement is the “default” in any dispute resolution between the regulated entity and the regulator (e.g.: USEPA/DEQ)
Method 21 Procedures

- **Subpart BB** leaks determined by Method 21 in 40 CFR Part 60
- Detection instrument meet the performance criteria
- Detection instrument calibrated before use on each day
- Calibration gases include a “zero” air and a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane
- Background level shall be determined
- Instrument probe traversed around all potential leak interfaces as close to the interface as possible
- A facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight, for greater than 300 hours per calendar year
Method 21 Procedures

Instrument probe traversed around all potential leak interfaces as close to the interface as possible …
**PID or FID?**

PIDs are allowed to be used for LDAR monitoring (Method 21, sec. 6.1)

6.0 Equipment and Supplies

A VOC monitoring instrument meeting the following specifications is required:

6.1 The VOC instrument detector shall respond to the compounds being processed. Detector types that may meet this requirement include, but are not limited to, catalytic oxidation, flame ionization, infrared absorption, and photoionization.

- LDAR rules specify 10,000 ppm methane or n-hexane as the reference gas. **PID's cannot ionize methane**, and n-hexane is not available at concentrations greater than 50% of the LEL (about 5,000 ppm)

- One could establish the linearity of a PID to 10,000 ppm of isobutene, and to 5,000 ppm n-hexane, and assume that it's good to go for n-hexane, but the assumption has not been tested

- FID and other monitoring equipment may not have same constraints
Point of Waste Origination

• **Subpart CC** “point of origination” designation is where a hazardous secondary material (e.g.; sludge or by-product) produced by a process is intended to be discarded (i.e., no longer can be used and is diverted from or separated from the production process)
  
  – Solid waste produced by the system becomes a hazardous waste as defined by Part 261

• Owner or operator is responsible for ensuring the waste determination is representative of current worst case waste streams
  
  – Repeat when waste stream or process changes
  
  – Update annually
Average VOC Determination

• Testing:
  – Sample hazardous waste
  – Analyze samples using one of seven specified methods or other methods validated using specified procedures (Method 25D)

• Process knowledge:
  – Application of owner/operator experience using appropriate information

• VO concentration must be determined for each waste stream

Note: Organic compounds included with a Henry’s law constant value of at least 0.1 mole-fraction-in-the-gas phase/mole-fraction-in-the liquid-phase at 25 degrees Celsius

Also note: Appendix VI of Part 265 presents a list of compounds known to have a Henry’s law constant values less than the cutoff level
Process Knowledge

• Provides flexibility to use available information to determine VO concentration of a hazardous waste

• Information sources can be:
  – Existing information collected for other purposes
  – New information collected specifically for the waste determination
  – For hazardous waste generated off-site, information provided to TSDF by waste generator
“Overlap” Exemptions

Subpart AA, BB, CC exempt units which are required to comply with comparable subparts of 40 CFR Parts 60, 61 or 63 of the Clean Air Act

- New Source Performance Standards – NSPS (Part 60)
- National Emission Standards for Hazardous Air Pollutants – NESHAP (Part 61)
- Part 63 NESHAPs - Maximum Achievable Control Technology – MACT (Part 63)

Note: RCRA may apply to smaller facilities/units

Also: CAA, NESHAP standards will generally have lower leak rate definitions than RCRA
Overlap Recordkeeping/Reporting

Required recordkeeping and reporting provisions that afford opting out of one or more of subparts AA, BB and CC include:

- **Subpart AA** — §264.1030(e)
  - Certification and records

- **Subpart BB** — §264.1064(m)
  - No certification but records must be kept

- **Subpart CC** — §264.1080(b)(7) & §1089(h) & (j)
  - Certification and records

*Note: Any permit conditions that are not part of 40 CFR Parts 60, 61 or 63 requirements do not exempt facilities from having to comply with any applicable RCRA air requirements*
§ 270.11  Signatories to permit applications and reports.

(d)(1) Any person signing a document under paragraph (a) or (b) of this section must make the following certification:

”(b) Reports. All reports required by permits and other information requested by the Director …)

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

•  Dated and signed by a responsible corporate officer
USEPA RCRA OAES On-line Training

- Complete Workshop Application (based on intense, Region 4, 3-day Workshop)
- Searchable for research topics
- Non-linear, so you can review only information you need
- Includes all reference documents with hyperlinks in the training to the reference
- Narrated w/ speaker notes
- Available at the EPA Environmental Response Training Programs Virtual University (ERTPVU) at this link:

  [RCRA Organic Air Emission Standards](#)

Note: You will need to establish a user name and pass word with the ERTPVU
Technical Resources

- Part 111, Hazardous Waste Management
- Code of Federal Regulations (40 CFR 260 TO 299)
- Preambles to the Code of Federal Regulations
- RCRA Subparts AA, BB, and CC Regulations Body of Knowledge
- AA, BB, CC checklists from various States
- USEPA and WMRPD technical specialists
- Various guidance documents (USEPA)
- *Wade and Jim*
Questions?
Important Points to Take Home!

- Organic Air Emission Standards (OAES) are complex and highly technical.
- If you have VOC’s, look closely at AA, BB, CC.
- Why now? The history of air quality being overlooked. It is the right thing to do. Also, remember the current NEI and the potential for penalties.
- AA, BB, CC compliance is a generator responsibility! Know your own waste. Then, manage it properly!
- We have only scratched the surface today!
Thank you for helping to protect Michigan’s environment!

www.michigan.gov/deqevents

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