Air Quality Regulations 101

Chris Hare
Saginaw Bay District Supervisor
DEQ, Air Quality Division
989-894-6215
harec@michigan.gov

Presentation Discussion Points

- Why? What's the big deal?
- What air emissions are regulated?
  - NAAQS, HAPs, and TACs
- Potential to Emit and Source Category
- How are emissions regulated?
  - Regulations, Rules, and Permits
- Tying it all together

Why regulate air emissions?

What air emissions are regulated?

- Pollutants with established National Ambient Air Quality Standards (NAAQS)
  - CO, NO_X, SO_2, PM, Lead, Ozone (VOC)
  - NAAQS determine Attainment and Non-Attainment areas.
    - Attainment Areas are those that have ambient air below these standards.
    - NAAQS Non-Attainment
      - Sulfur Dioxide – In Wayne County, a corridor that runs along I-75 extending east to the shoreline border was recently designated to nonattainment with the new 2010 standard.
      - Lead – All Michigan Counties meet the Lead National Ambient Air Quality Standards except for a small area in Ionia County
- Hazardous Air Pollutants (HAPs) - 187 Pollutants
  - Examples are Asbestos, Benzene (including benzene from gasoline) and Toluene
- Toxic Air Contaminants (TAC) – as defined by state rule
  - Examples are ddt and cyanide

Potential to Emit and Source Category

While actual emissions are based on the amount of contaminants your facility emits under normal operating conditions using actual usage data, PTE refers to the maximum amount or potential emissions of contaminants that your facility could release into the air based on the physical and operational design processes

- Potential to Emit (PTE)
  - PTE is the maximum amount of air contaminants that your facility could emit if all of the following is evaluated:
    - each process is operated at 100% of its design capacity
    - each process is operated 24 hours/day, 365 days/year
    - the materials emitting the highest amount of air contaminants are used or processed
    - air pollution control equipment either is not in use or is turned off.
- Source Categories
  - Major Source
    - 100 tons/year or more for CO, NO_X, PM, VOC, SO_2
    - 25 tons /year of any combined HAPs
    - 10 tons/year of any single HAP
- Minor Source
  - Emissions less than Major levels
- Synthetic Minor
  - Permit conditions that prevent emissions greater than Major source thresholds

How are air emissions regulated?

- Regulations
  - Title 40 Code of Federal Regulations Part 60 **aka** New Source Performance Standards (NSPS) **aka** 40CFR63
  - 40CFR63, National Emission Standards for Hazardous Air Pollutants (NESHAP)
  - 40CFR75, Continuous Emission Monitoring (CEMS)
  - Air Quality Rules and Regulations - www.michigan.gov/air (click "News and Info," then "State Air Laws and Rules"
- Permits
  - Permits to Install (PTIs)
    - Operates as contract
    - Contains emission and material limits, operation and design restrictions
    - Contains monitoring/recordkeeping, testing sampling, and reporting requirements
    - Allows facility to begin construction or installation
    - Major sources must also obtain a Renewable Operating Permit
  - Opt-out PTI
    - For a source that has the potential to be a Major source, yet the desire to remain a Minor source
    - Permit includes emission limits, material limits, or design restrictions to prevent Major source emissions
  - Renewable Operating Permits (ROPs) (Title V)
    - Title V of the Clean Air Act is the explanation of Permits, or ROPs
    - ROPs are federal permits
    - Pulls together all of the requirements into a single document
    - Gives a better picture of air emissions at a facility
    - All PTIs and any other applicable air quality requirements will be incorporated into one permit.
  - Air Permit duties
    - Source duties
      - Comply with conditions
      - Monitor emissions
      - Maintain records
      - Submit reports
    - AQD duties
    - Monitor stack testing
    - Conduct inspections
    - Review emissions reports
    - Review compliance certifications
    - Certify monitoring systems
    - Respond to complaints

Overview

- Emissions are regulated to ensure the comfortable enjoyment of life and health
- Facilities use PTE to determine their source size for pollutants identified in the NAAQS, HAPs, or TACs

Air Quality Division Overview

- AQD operates within strict framework of what is allowed by law
- Procedures for review of permit application
  - Operate openly and transparently
    - Opportunities for public comment
    - Staff available for questions