

I. Procedural Context
2.01 Scope

Ohio's New Source Permit Program ▲ Emission standards and requirements ▲ Hazardous Air Pollutant regulation, implemented through National Emission Standards for Hazardous Air Pollutants ("NESHAPS") and Maximum Achievable Control Technology ("MACT") provisions
▲ Ohio's Title V permit program ▲ Shale oil and gas developments.

Enforcement of Ohio's Air Pollution Control laws

2.02 Air Emission Overview

1. **Federal** - Ohio has a comprehensive statutory and regulatory program to control emissions of air contaminants.
 - a. Like water & solid waste, the feds establish the basics of the program - for air it's the Clean Air Act (CAA).
 - b. Key point of the CAA is the setting and attainment of National Ambient Air Quality Standards ("NAAQS")
 - intended to protect public health and welfare.
 - c. U.S. EPA established NAAQS for six pollutants: sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide, and lead. (come up with a mnemonic for the 6)
 - d. States are required to meet & attain NAAQS via adoption and implementation of State Implementation Plans ("SIPs"),
 - SIPs are state rulemakings that must be approved by U.S. EPA.
 - Specific permitting requirements and emission limitations are imposed on individual and mobile sources.
 - e. If a state fails to adopt an acceptable SIP, USEPA will issue a Federal Implementation Plan ("FIP")
 - f. Two Types NAAQS status -
 - "Attainment" Areas - (typically counties) where the NAAQS are met
 - "Non-Attainment" Areas - where NAAQS are not met
 1. An area may be attainment for certain pollutants and non-attainment for others.
 2. Activity in nonattainment areas are more rigorously permitted than in attainment areas.
 - g. U.S. EPA also
 - limits emissions of a universe of compounds known as "hazardous air pollutants,"
 - States must use state of the art control technologies on certain new industrial sources of emissions,

- control utility industry emissions of pollutants which may result in “acid rain,”
 - require the phase out of ozone-depleting compounds, and
 - require “Title V” operating permits for “major” sources.
- h. U.S. EPA retains authority to enforce these regulatory programs, but Ohio EPA has been delegated authority to implement the requirements through its permitting processes.

2. **State** - Ohio’s air legislation is found in ORC 3704.

- a. Purpose:
 - “protect and enhance the quality of the State’s air resources so as to promote the public health, welfare, economic vitality, and productive capacity of the people of the state”; and to
 - “enable the State, through the director of environmental protection, to adopt and maintain a program for the prevention, control and abatement of air pollution that is consistent with the federal Clean Air Act.”
- b. Ohio EPA’s Director has broad powers under Ohio law.
 - She may adopt rules regarding:
 - (1) the prevention, control and abatement of air pollution;
 - (2) permit requirements for the installation, construction, modification, and operation of air emission sources; and
 - (3) monitoring requirements for emissions, ambient air quality, and meteorological conditions.
 - The Director may also issue orders requiring the abatement or prohibition of emissions that violate statutory or regulatory requirements.
 - Under Ohio EPA regs (OAC), generally all but the smallest of air sources (De minimis sources emit less than 10 lbs/day of any pollutant and no more than one ton per year of any hazardous air pollutants) require either a PTI (large source) or PTIO prior to construction (or modification), and, if large source, a Title V permit soon after operating.
 - Small sources get a PTIO. Larger sources get a PTI, then a Title V Permit for operation.
 - Both PTI/Os must show that the source will use the “Best Available Technology” (BAT) to control emissions.
 - BAT is determined on a case-by-case basis
 - BAT can be an add-on control technology (e.g., a baghouse, incinerator, or scrubber), operational process controls (e.g., use of low solvent paint or coatings), or operational methods (e.g., periodic application of dust suppression chemicals).
 - PTI/Os may include emission limits, operational restrictions, monitoring requirements, and record keeping and reporting requirements.
 - Ohio EPA implements its air program through its 5 district offices and 9 local air agencies. Permits typically are negotiated at the local office, but ultimately are issued out of the central office in Columbus.

c. After a permit issued, Ohio EPA’s enforcement of the State’s air law, rules, and permit terms and conditions may consist of notices of violation, consensual or unilateral DFFOs, or, in more significant circumstances, referral to the Office of the Attorney

General for civil or criminal judicial proceedings. (This concept should be review for you. See CH 1, 15 if you need reinforcement)

II. Ohio Air Pollution Control Program

2.03 New Source Permits

1. Overview -

- Who needs New Source Permits
 - New Stationary Sources - Owners or operators (O or O) of most new stationary sources of air pollution must obtain either a PTI or PTIO from Ohio EPA prior to starting construction of a new source or modifying and existing one. (little construction okay.)
 - Modifications that Increase Allowable Emissions - O & O operators may also need a PTI/O before implementing modifications to procedures or equipment that increase “allowable emissions” (see below) from an air pollution source or result in emissions of an air pollutant not previously emitted.
- What is a PTI/O
 - A PTI/O outlines technical and design requirements for a new or modified source, and specifies a source’s allowable air pollutant emissions.

2. Permits to Install (PTI) & Permits to Install & Operate (PTIO)

- An owner or operator cannot install or construct a new source of air pollution without first obtaining either a PTI/O from Ohio EPA.
 - PTIs are required for sources that trigger Title V permitting requirements based on potential or actual emissions.
 - PTIOs are required for sources that do not trigger Title V permitting requirements, and allow both the construction and operation of a source.
- “new source” is any air contaminant source where the installation or construction or modification occurred after January 1, 1974, except *de minimis* sources of air pollution that are exempt from permitting requirements, but they still may need to keep records and report to Ohio EPA. A complete list of PTI or PTIO exemptions is specified in the rules.
 - Modification include any physical change, or change in the method of operation, that results in the emission of an air pollutant not previously emitted by the source or results in an increase of the allowable emissions of such source.
- “Allowable emissions” means the emission rate of an air contaminant source calculated using the maximum rated capacity of the air contaminant source, and the most stringent federal and state emissions limits.
 - Multiple emissions units at separate facilities may be aggregated and considered a single source for purposes of Title V and New Source Review if the units are: under common control, belong to the same industrial grouping, and are located on one or more “contiguous or adjacent properties.”U.S. EPA issued a proposed rule addressing aggregation of multiple sites.
- PTI/O Steps: 1. complete Application form, the Additional Information form, the Specific Emissions Unit Information form for each new source, and the Emissions Activity Category form. 2. Submit completed forms to the local DO or Air Agency, where they undergo an initial review for completeness, 3. Once complete, application package sent to Central Office, Permit Management Unit for technical review.

- The applicant must demonstrate that the new or modified source will employ BAT to control air pollutant emissions.
 - BAT is any combination of work practices, raw material specifications, throughput limitations, source design characteristics, evaluation of the annualized cost per ton of air pollutant removed, and air pollution control devices that have been previously demonstrated to Ohio EPA to operate satisfactorily in Ohio or other states with similar air quality on substantially similar sources of air pollution.
 - BAT determinations for source categories were supposed to be in rules as of 2009, but Ohio EPA has not met this deadline, and instead has promulgated a policy that calls for a case-by-case determination until such rules are issued. Ohio EPA has recognized this tenuous position and notes that it will issue permits without BAT upon request of the regulated entity, but will also send such permits to U.S. EPA, which may result in an enforcement action against both Ohio EPA and the permittee by U.S. EPA.
 - Ohio EPA may not impose BAT except for NAAQS pollutants or precursors. And, Ohio EPA may no longer impose BAT for sources that have a potential to emit less than 10 tons per year (taking into account pollution control technology).
- If the PTI/O is approved, Ohio EPA will issue a draft, proposed, or final PTI/O. The applicant is allowed 18 months to begin construction of the new air pollution source after Ohio EPA issues a final PTI/O. Ohio EPA is required to issue a final PTI/O within 180 days after it receives a completed application. Nonetheless, the time it takes to obtain a PTI varies depending on several factors, including the size of the new source and the current workload of Ohio EPA. Consequently, at least six months to more than one year may be needed to obtain a final PTI/O. Rush PTIOs are available.
- Ohio EPA also has developed model general PTI/Os for use by certain specified sources, including: certain boilers; dry cleaning operations; miscellaneous metal parts painting lines; ready mix concrete batch plants; unpaved roadways and parking areas; paved roadways and parking areas; and storage piles.
 - The model general permits provide uniform terms and conditions for each source category.

3. New Source Review -

- a. U.S. EPA sets NAAQS for criteria pollutants (lead, carbon monoxide, ozone, sulfur dioxide, nitrogen oxide, and particulate matter). Ohio's SIP sets forth the State's plan to attain the NAAQS in Ohio.
- b. The required control technology for new or modified sources in attainment areas is best available control technology ("BACT") and is the lowest achievable emissions rate ("LAER") in non-attainment areas.
- c. New Source Review is applicable to the construction of new "major stationary sources" in attainment areas (referred to as "Prevention of Significant Deterioration" or "PSD" permitting) and non-attainment areas (referred to as "Non-Attainment New Source Review").

- In attainment areas, a new major stationary source is any stationary source that emits, or has the potential to emit, 250 tons per year or more of any criteria pollutant.
 - In a non-attainment area is any stationary source that emits, or has the potential to emit, 100 tons per year or more of any criteria pollutant.
- 4. New Source Performance Standards - “NSPS” are emission standards for new, reconstructed, and modified affected facilities within certain source categories that U.S. EPA has concluded cause or significantly contribute to air pollution.
 - Ohio EPA is responsible for implementation, compliance assistance, and enforcement of the NSPS program. U.S. EPA maintains concurrent enforcement authority.
- 5. Air Toxics Policy - In mid-90s, Ohio EPA felt USEPA had not fully dealt with certain air pollutants. So, it developed an “Air Toxics Policy” and incorporated it in the PTI process through BAT requirements.
 - Any compound listed in [OAC 3745-114-01](#) is an air toxic compound. A PTI applicant must provide Ohio EPA with computer modeling to determine the maximum ambient ground level concentration (“MAGLC”) of an air toxic compound at the applicant’s property line if the allowable emissions of an air toxic compound from a new or modified source of emissions are greater than or equal to one ton per year.
 - New or modified sources whose emissions of air toxic compounds exceed 80% of the MAGLC concentrations must adopt BAT, control air toxic compound emissions so as to not exceed the MAGLC, and demonstrate no health hazards through modeling.
 - Sources that emit air toxic compounds below 80% of the MAGLC must submit an annual statement certifying that their emissions remain as modeled

2.04 Emission Standards

1. Emissions Standards Program Overview - Comprehensive
 - a. Ohio’s air pollution control standards include requirements for reporting malfunctions of air pollution control equipment, restrictions on stack heights, ambient air quality standards, and emissions limitations for various pollutants such as particulate matter and sulfur dioxide. There also are specific limitations on the emissions of carbon monoxide and nitrogen oxides. The regulations also include prohibitions on open burning, procedures for emergency episodes, and motor vehicle emission inspections. To prevent the release of hazardous substances, Ohio has adopted an accidental release prevention program.
 - b. Enforced through the SIP
2. n/a
3. Particulate Matter - Particulate matter is any material, other than water in uncombined form, that is or has been airborne.
 - a. Who Regulates - Ohio regulates particulate matter through [OAC Chapter 3745-17](#). U.S. EPA has set NAAQS for “fine” and “coarse” particulate matter. Fine particulate matter consists of particles less than or equal to 2.5 micrometers in

- diameter (PM_{2.5}), while coarse particulate matter consists of particles with diameters of less than or equal to 10 micrometers (PM₁₀).
- b. What are the standards - Ohio EPA has promulgated standards for opacity, prohibiting visible particulate emissions from any stack from exceeding twenty percent as a six minute average, with certain exceptions.
 - c. What kinds of controls work? - Requirements for fugitive dust emissions include the use of reasonable available control measures, including, but not limited to, the use of water as a dust suppressant or the use of hoods or fans to capture the dust emissions.
4. Sulfur Dioxide - created through the burning of sulfur containing products, like coal.
 5. Nitrogen Oxides - also known as NO_x. Budget trading program available for emitters.
 6. Carbon Monoxide, Ozone, and Volatile Organic Compounds - Carbon monoxide is created through the inefficient burning of carbon-based fuels. The exposure of various VOCs with sunlight creates ground level ozone. Thus, the control of VOCs is necessary to achieve compliance with the NAAQS for ozone.
 - a. In 2008, the 8-hour NAAQS was reduced from 80ppb to 75ppb. Then in 2015 reduced to 70 ppb on October 1, 2015.
 - i. The agency made attainment and non-attainment designations in 2017. States with counties designated as non-attainment must then submit plans to U.S. EPA by 2020 demonstrating how they will meet the new standards. The new standard is under fire over concerns that it could significantly impede economic growth and does not adequately address background ozone levels.
 1. 358 counties across the country can not meet the 70ppb, which triggers non-attainment for all NAAQS. So, sources would be required to meet all NAAQS for un-attainment in an area that may have a high background ozone level.
 7. Lead Emissions - 1.5 micrograms per cubic meter. Not really an issue in Ohio, except for one company.

2.05 Hazardous Air Pollutants - NESHAPS and MACTS

- U.S. EPA developed emissions standards for “major sources” and “area sources” of hazardous air pollutants (“HAPs”). These emissions standards are known as the National Emissions Standards for Hazardous Air Pollutants, or NESHAPS.
 - “Major sources” are stationary sources with the potential to emit 10 tons per year or more of any one hazardous air pollutant or 25 tons per year or more of any combination of HAPs.
- NESHAPS are defined based on the type of facility for major sources, (for example, bulk gasoline terminals or epoxy resin manufacturers) or can be defined based on the emissions released from a facility for both major and area sources, (for example, fugitive benzene emissions or mercury emissions).
- Maximum Achievable Control Technology (“MACT”) is defined by Ohio EPA to mean an emission limit that is set based on the most stringent emission limit achieved in practice by the best controlled similar source, and reflects the maximum degree of emissions reduction that Ohio EPA determines is achievable, taking into consideration the costs of

achieving the reduction and any non-air quality health and environmental impacts and energy requirements.

- A MACT determination is required by Ohio EPA prior to issuing a permit for constructing or modifying a major source of HAPs.
 - Some major sources of HAPs, for example research and development facilities, are exempt from this requirement.
 - A proposed compliance date for MACT standards must be submitted with any Title V permit application.

2.06 Title V Permits

1. Overview - Title V of the CAA governs operating permits for major sources of air pollution.
 - a. Ohio EPA issues Title V permits after review by Region V of U.S. EPA.
 - b. Title V permits are federally enforceable,
 - i. meaning that permit terms and conditions (other than state only T&Cs) are enforceable by
 1. U.S. EPA and the Department of Justice,
 2. private citizens through the use of citizen suits, and
 3. State of Ohio.
2. Applicability - Title V permits are required for major sources and affected sources.
 - a. Major sources are sources that emit, or have the potential to emit,
 - i. ten tons per year of any single HAP,
 - ii. twenty-five tons per year of any combination of HAPs, or
 - iii. one hundred tons per year of any other air pollutant, including VOCs/ozone, lead, particulate matter, SO₂, NO_x and CO.
3. Potential to Emit - just what it sounds like - “maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.”
4. Exemptions - synthetic minors - way to avoid a higher Potential to Emit
 - a. An owner or operator may agree to limit emissions through the use of control technology or hours of operation, resulting in emissions that are less than the Title V thresholds.
5. Startup, Shutdown, and Malfunctions - n/a
6. Monitoring, Recordkeeping, and Reporting - n/a
7. Modifications - n/a
8. Responsible Official Certifications

2.07 Shale Oil & Gas Developments

- Shale O & G has been booming in Ohio. Specific environmental concerns
- In 2012, Ohio EPA issued a general air permit for O&G operations. This meant they did not have to go through individual source-specific permitting. (What do you think of this?)
 - Exempt because temporary, de minimus impact, limited operation,
 - Covers turbines, flares, storage, unpaved roadways (fugitive dust)
- Later that year, USEPA followed suit

2.08 Enforcements

1. Introduction - details in Ch 21 (civil) & Ch 22 (criminal)

2. Federal - Feds delegated authority to Ohio to administer Title V, SIP.
 - a. Citizen Suits allowed, but must give notice before filing.
 - b. If state has already started civil enforcement, Citizen Suit barred from proceeding.
 - c. Gov't admin order can impose up to 37,500/day penalty but no more than 295K

3. State - Ohio law does not provide for citizen suits, but does allow individual citizens to submit verified petitions for violations. Ohio EPA is required to investigate whether a violation has occurred, is occurring, or is likely to occur and, if so, take enforcement action.
 - a. Ohio air pollution control enforcement is handled administratively through Director Findings and Orders.

Definitions

RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards (i.e., non-attainment areas).

BACT, or Best Available Control Technology, is required on major new or modified sources in clean areas (i.e., attainment areas).

LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas.

MACT is defined by Ohio EPA to mean an emission limit that is set based on the most stringent emission limit achieved in practice by the best controlled similar source, and reflects the maximum degree of emissions reduction that Ohio EPA determines is achievable, taking into consideration the costs of achieving the reduction and any non-air quality health and environmental impacts and energy requirements.

BAT - Best Available Technology