



Indiana Department of Environmental Management

Protecting Hoosiers and Our Environment Since 1986



Environmental Management



Air Module

Presented by Indiana Department of Environmental Management
Office of Program Support
Assistance and Outreach Branch
Compliance and Technical Assistance Program



Overview

- History and Regulatory Background
- Legal Definitions from Air Regulation
- Potential to Emit (PTE)
- Permits
 - Permitting Approvals
 - Other Considerations
- Compliance Inspections
- Enforcement
- PTE Calculations/Exercises

The Clean Air Act



President Lyndon B. Johnson signs the Clean Air Act, December 17, 1963

- Purpose - Clean Air Act (CAA)
 - Enacted in 1963
 - Amendments in 1970, 1977, and 1990



The Clean Air Act

- Established a system to measure air quality and provide for continuous improvement.
 - National Ambient Air Quality Standards (NAAQS) - Criteria pollutants
 - New Source Performance Standards (NSPS)
 - National Emissions Standards for Hazardous Air Pollutants (NESHAPs)
 - Permits
- Implemented by the U.S. Environmental Protection Agency (U.S. EPA).
- State programs implement under agreement with U.S. EPA.





Clean Air Act Overview

- National Ambient Air Quality Standards (NAAQS)
 - Six criteria pollutants
 - Carbon monoxide (CO)
 - Nitrogen Dioxide (NO₂)
 - Sulfur Dioxide (SO₂)
 - Particulate matter (PM) (PM₁₀ and PM_{2.5})
 - Ozone (O₃) – NO_x and VOC
 - Lead (Pb)



Clean Air Act Overview - NAAQS

Size comparisons for PM particles

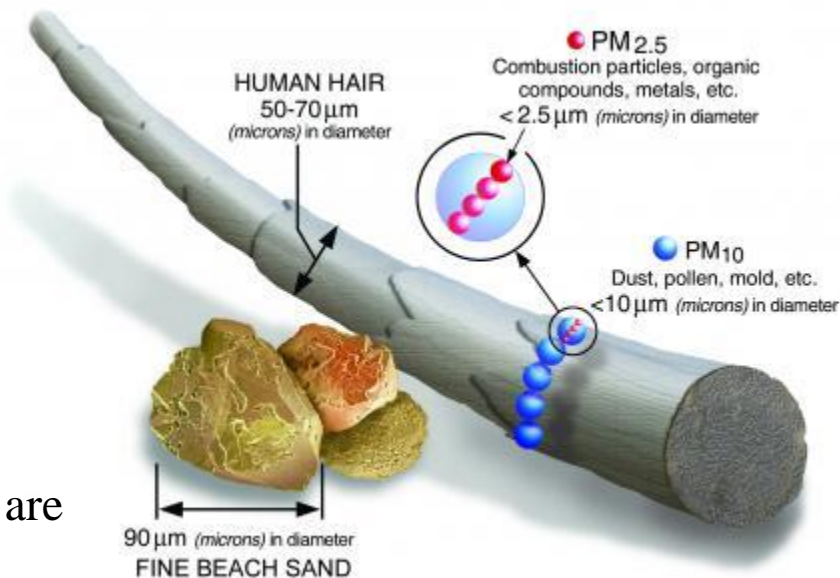
■ PM stands for particulate matter (also called particle pollution): the term for a mixture of solid particles and liquid droplets found in the air.

The PM in an aerosol can range in size from 0.001 to greater than 100 microns in diameter.

Particle pollution includes:

- **PM₁₀**: inhalable particles, with diameters that are generally 10 micrometers and smaller; and
- **PM_{2.5}**: fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.
 - How small is 2.5 micrometers? Think about a single hair from your head. The average human hair is about 70 micrometers in diameter – making it 30 times larger than the largest fine particle.

The metric used for describing PM is the micron





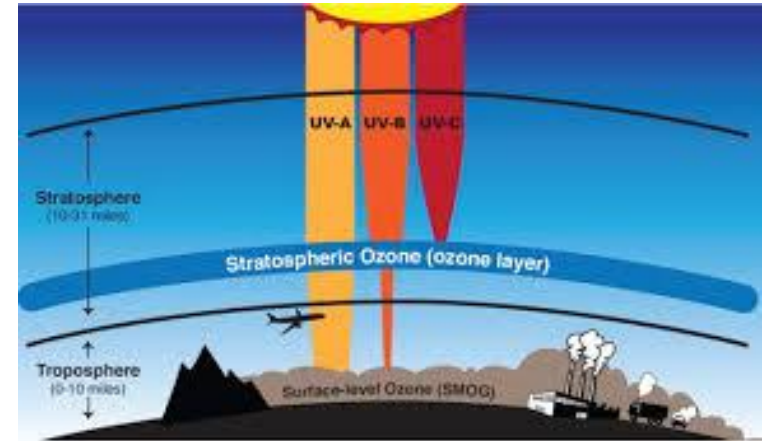
Clean Air Act Overview - NAAQS

OZONE (O₃)

Ozone is a gas composed of three atoms of oxygen (O₃). Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found.

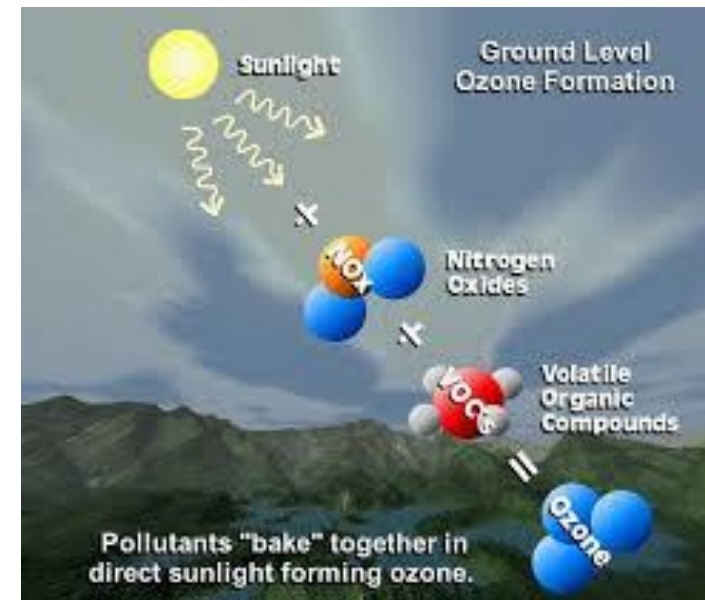
Good Ozone

Called stratospheric ozone, good ozone occurs naturally in the upper atmosphere, where it forms a protective layer that shields us from the sun's harmful ultraviolet rays.



Bad Ozone

Tropospheric, or ground level ozone, is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC). This happens when pollutants emitted by various sources chemically react in the presence of sunlight.





Clean Air Act Overview

Each geographical region is given a designation by the U.S. EPA to describe the air quality of the region in relation to the NAAQS for the six criteria pollutants.

Air Quality Control Regions (AQCRs)

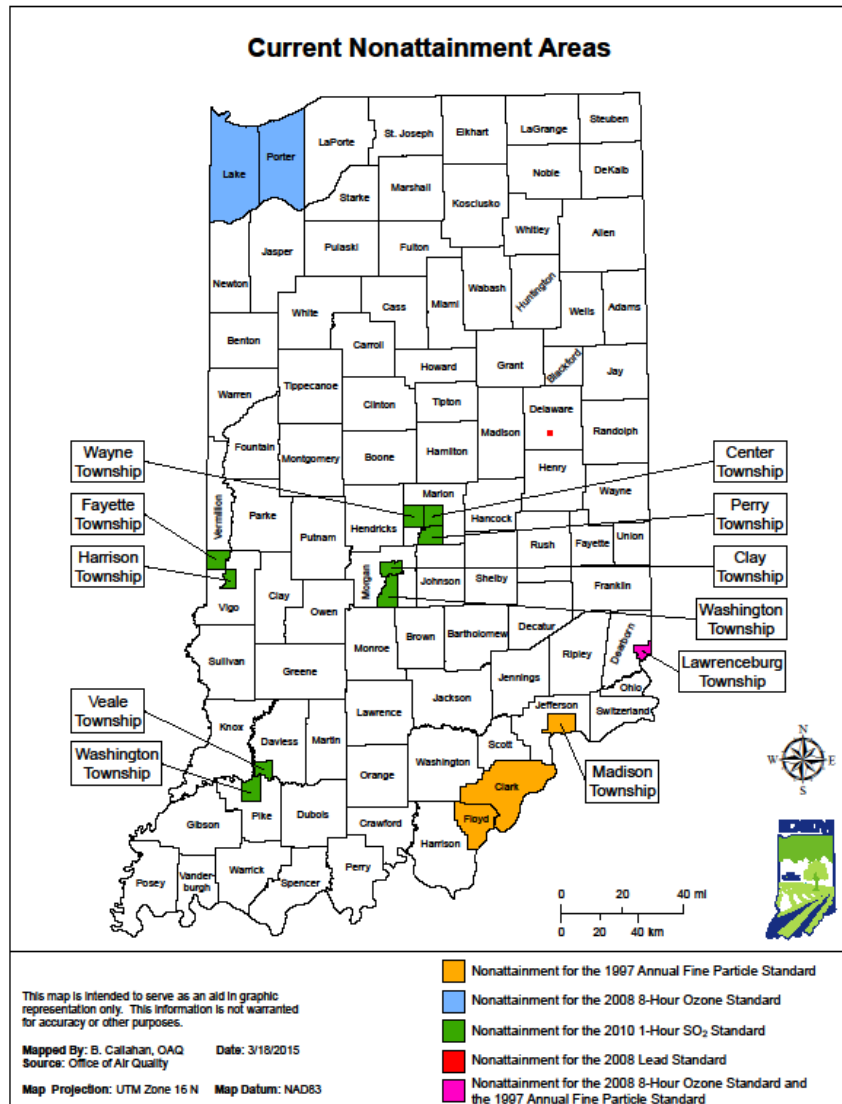
- Attainment
- Nonattainment
- Unclassifiable

Designation is criteria pollutant specific.



Air Quality Control Regions (AQCRs) in Indiana

Permit level/applicability depends on the attainment status of the county or portion of a county in which the source is located.





Clean Air Act Overview

NAAQS is the primary driving force behind most air regulations.

- State implementation plans (SIPs)
 - Local, state, and federally enforceable
 - Created under U.S. EPA guidance and approval
- Federal Implementation Plan (FIP)





Clean Air Act Overview

- **New Source Performance Standards (NSPS)**
 - Technology based standards, developed by the U.S. EPA under Section 111 of the CAA, applying to specific categories of stationary sources (40 CFR Part 60)(Manual Appendix A).
- **National Emissions Standards for Hazardous Air Pollutants (NESHAP)**
 - Technology based standards for hazardous air pollutants, developed by the U.S. EPA under Section 112 of the CAA, applying to specific categories of stationary sources (40 CFR Part 61 and 63)(Manual Appendices B and C).
 - Hazardous Air Pollutants (HAPs) are those pollutants known or suspected to cause cancer or other serious health effects, such as birth defects, reproductive effects, or adverse environmental effects. (187 hazardous air pollutants currently regulated).



Clean Air Act Overview

- New Source Performance Standards (NSPS)
 - Categories apply to many different industrial operations or specific equipment.
 - Requirements differ if the facility is considered existing, new, modified, or reconstructed.
 - Standard is based on Best Available Demonstrated Control Technology (BADCT).



Clean Air Act Overview

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

- Requirements differ if major or area source for HAPs.
- Categories apply to many different industrial operations or specific equipment.
- Requirements differ if the facility is considered existing, new, modified, or reconstructed.
- Standard is based on maximum degree of emission reduction that the EPA determines to be achievable, or Maximum Achievable Control Technology (MACT)



Clean Air Act Overview

- National Emissions Standards for Hazardous Air Pollutants (NESHAP)
- Must meet emission standards:
 - Maximum Achievable Control Technologies (MACTs)
 - New source must achieve best control.
 - Existing source must achieve average emissions limit by the best 12 percent of existing sources.
 - Generally Available Control Technologies (GACTs)
 - Less stringent standards based on widely practiced technology and work practices.



State of Indiana – Title 326 Air Pollution Control Division

- Article 1 [General Provisions](#)
- Article 2 [Permit Review Rules](#)
- Article 3 [Monitoring Requirements](#)
- Article 4 [Burning Regulations](#)
- Article 5 [Opacity Regulations](#)
- Article 6 [Particulate Rules](#)
- Article 6.5 [Particulate Matter Limitations Except Lake County](#)
- Article 6.8 [Particulate Matter Limitations For Lake County](#)
- Article 7 [Sulfur Dioxide Rules](#)
- Article 8 [Volatile Organic Compound Rules](#)
- Article 9 [Carbon Monoxide Emission Rules](#)
- Article 10 [Nitrogen Oxides Rules](#)
- Article 11 [Emission Limitations for Specific Types of Operations](#)
- Article 12 [New Source Performance Standards](#)
- Article 13 [Motor Vehicle Emission and Fuel Standards](#)
- Article 14 [Emission Standards for Hazardous Air Pollutants](#)
- Article 15 [Lead Rules](#)
- Article 16 [State Environmental Policy](#)
- Article 17 [Public Records \(Repealed\)](#)
- Article 17.1 [Public Records; Confidential Information; Confidentiality Agreements](#)
- Article 18 [Asbestos Management](#)
- Article 19 [Mobile Source Rules](#)
- Article 20 [Hazardous Air Pollutants](#)
- Article 21 [Acid Deposition Control](#)
- Article 22 [Stratospheric Ozone Protection](#)
- Article 23 [Lead-based Paint Program](#)
- Article 24 [Trading Programs: Nitrogen Oxides \(NO_x\) and Sulfur Dioxide \(SO₂\)](#)
- Article 25 [Voluntary Performance Based Leadership Programs](#)
- Article 26 [Regional Haze](#)



Legal Definitions Related to Air Regulation



- Understanding the precise legal meanings of words or phrases used in state and federal statutes is crucial in order to determine applicability of the rules and what is required of sources to comply with the provisions.
- Always reference the definitions section of each state and federal regulation before trying to determine applicability.



Legal Definitions Related to Air Regulation

- Emissions Unit (326 IAC 1-2-23.5) & (40 CFR 70)
 - An emissions unit is any part or activity at a source either emitting or having the potential to emit any regulated air pollutant under the Clean Air Act (CAA).
- Fugitive Emissions (40 CFR 70)
 - Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.



Legal Definitions Related to Air Regulation

Warning: Multiple definitions for the same term may lead to confusion.



- 326 IAC 1-2-21 "Construction" defined
 - Means fabrication, erection, or installation of an emission unit.
 - Does not include: installation of building support, erection of storage structure, dismantling of equipment and control devices, etc.
- 326 IAC 2-2-1 “Construction” defined
 - Any physical change or change in the method of operation.



Legal Definitions Related to Air Regulation

When Does "Construction" Begin?

Minor NSR (state construction permit)

"Construction" means fabrication, erection, or installation of an emission unit (facility) or air pollution control equipment at the location intended for its use.

Construction does not include any of the following:

- (1) installation of building supports and foundations;
- (2) laying underground piping or arbors;
- (3) erection of storage structures;
- (4) dismantling of existing equipment and control devices;
- (5) ordering of equipment and control devices;
- (6) off-site fabrication;
- (7) temporary storage within the source other than where permanent installation will occur.

This section does not apply to a major PSD source or a major PSD modification as defined in 326 IAC 2-2 or a major source or major modification as defined in 326 IAC 2-3.

Major NSR (PSD/nonattainment permit)

"Begin actual construction" means, in general, initiation of any physical on-site construction activities on an emissions units which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in the method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change. "Construction" means any physical change or change in the method of operations (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change of actual emissions. [326 IAC 2-3.1(d), (g)]



Legal Definitions Related to Air Regulation

- Facility (326 IAC 1-2-27)
 - Facility means any one structure, piece of equipment, installation or operation which emits or has the potential to emit any air contaminant. Single pieces of equipment or installations with multiple emission points shall be considered a facility for the purpose of this rule (326 IAC 1-2).
- Facility (40 CFR 72.2)(Not defined in 40 CFR 70)
 - Facility means any institutional, commercial, or industrial structure, installation, plant, source, or building.
- Facility (40 CFR 60)
 - Existing facility means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.



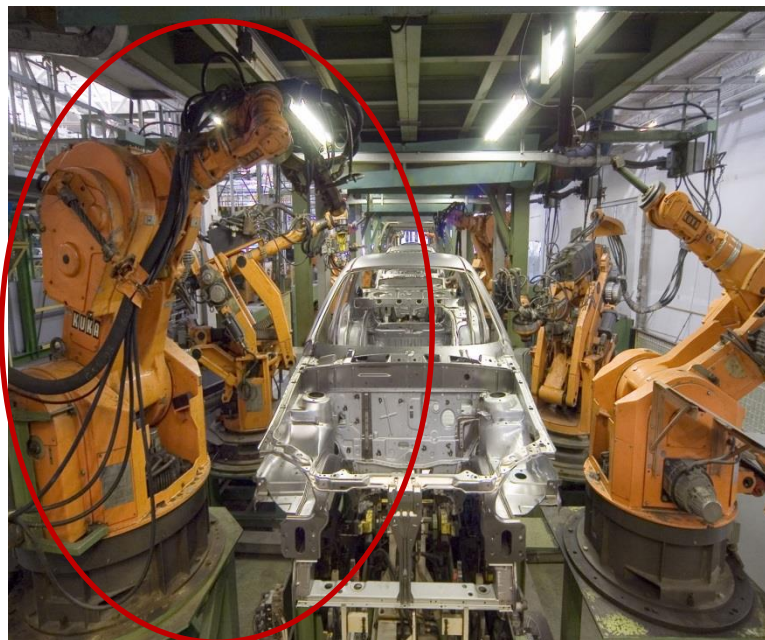
Legal Definitions Related to Air Regulation

- Source (326 IAC 1-2-73)
 - Source means an aggregation of one or more stationary emissions units that are located on one piece of property or on contiguous or adjacent properties are owned or operated by the same person (or by persons under common control) and belong to a single major industrial grouping.* * *
- Source (Stationary) (40 CFR 70.2) & (40 CFR 60)
 - Stationary source means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act.

The definitions of the terms "facility" and "source" for federal permitting purposes have different (inverse) meanings than the definitions of these terms as they pertain to state permitting. 20

Legal Definitions Related to Air Regulation

Source (Stationary) (40 CFR 70.2) =
Facility (326 IAC 1-2-27)



Source (326 IAC 1-2-73) =
Facility (40 CFR 72.2)





Standard Industrial Classification System (SIC) and North American Industry Classification System (NAICS)

- SIC code
 - Used by government agencies for classifying industries by a four-digit code.
 - First three digits indicate the industry group.
 - First two digits indicate the major group.
- NAICS
 - Largely replaced SIC.
 - Employs a five or six-digit code.



Standard Industrial Classification System (SIC) and North American Industry Classification System (NAICS)



- It is extremely important that a source has been classified under the correct SIC (and NAICS) codes.
- Many state and federal rules define applicability (or non-applicability) based on SIC/NAICS codes.
 - A source may have more than one SIC/NAICS code.
 - Can have a primary code, and several secondary codes.
 - SIC/NAICS codes are not assigned by IDEM.



Standard Industrial Classification System (SIC) and North American Industry Classification System (NAICS)



UNITED STATES
DEPARTMENT OF LABOR



Occupational Safety and Health Administration

ABOUT OSHA ▾ WORKERS ▾ EMPLOYERS ▾ REGULATIONS ▾ ENFORCEMENT ▾ TO

SIC Division Structure

- A. [Division A: Agriculture, Forestry, And Fishing](#)
 - [Major Group 01: Agricultural Production Crops](#)
 - [Major Group 02: Agriculture production livestock and animal specialties](#)
 - [Major Group 07: Agricultural Services](#)
 - [Major Group 08: Forestry](#)
 - [Major Group 09: Fishing, hunting, and trapping](#)
- B. [Division B: Mining](#)
 - [Major Group 10: Metal Mining](#)
 - [Major Group 12: Coal Mining](#)
 - [Major Group 13: Oil And Gas Extraction](#)
 - [Major Group 14: Mining And Quarrying Of Nonmetallic Minerals, Except Fuels](#)
- C. [Division C: Construction](#)
 - [Major Group 15: Building Construction General Contractors And Operative Builders](#)
 - [Major Group 16: Heavy Construction Other Than Building Construction Contractors](#)
 - [Major Group 17: Construction Special Trade Contractors](#)
- D. [Division D: Manufacturing](#)

North American Industry Classification Syst

Main

History

Development
Partners

Federal
Register Notices

NAPCS

FAQs

NAICS Search:

Enter keyword or 2-6 digit code

2012 NAICS Search

Enter keyword or 2-6 digit code

2007 NAICS Search

Enter keyword or 2-6 digit code

2002 NAICS Search

Downloads/Reference Files/Tools

- [2012 NAICS](#)
- [2007 NAICS](#)
- [2002 NAICS](#)

2012 NAICS

The following table provides detailed information on the structure of NAICS.

Sector	Description
11	Agriculture, Forestry, Fishing and Hunting
21	Mining, Quarrying, and Oil and Gas Extraction
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information
52	Finance and Insurance



What is the Potential to Emit (PTE)?



- Potential to Emit (PTE)
 - Based on operating at maximum capacity.
 - 24 hours per day, 7 days per week, and 52 weeks per year – total of 8,760 hours per year.
 - Always based on the worst-case operating scenario.
 - Calculated before the use of air pollution control devices.
 - All emission units must be evaluated for PTE for all required pollutants.
 - PTE summary for the source determines:
 - If an air permit is applicable; and
 - What type of permit is required.



Calculating the Potential to Emit (PTE)

- Calculating PTE



Identify all emission units at the source.

- Start with a process flow diagram
- Create a unique ID for each unit
- Create a written description of each unit



Calculating the Potential to Emit (PTE)

Example Emission Unit Description

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

One (1) Coating Line, installed in 1989, utilizing an electrostatic air atomization spray application system to coat miscellaneous metal parts, with maximum capacity of 1,500 metal parts per hour, with an average conveyor line speed of six (6) feet per minute, and consisting of:

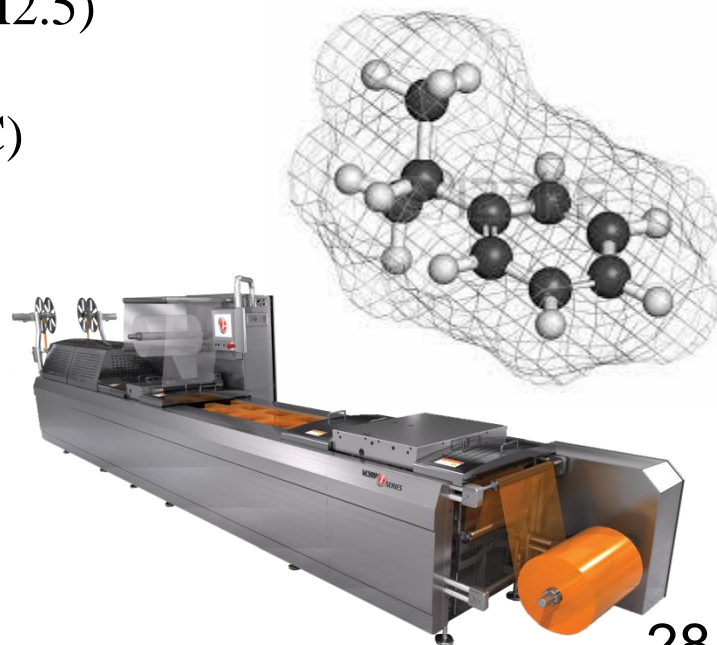
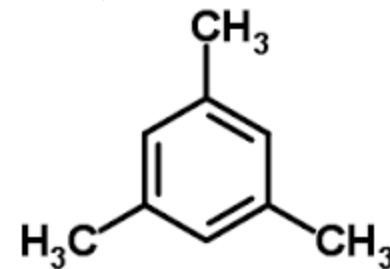
- (a) Two (2) Binks automated paint spray booths, identified as B-1 and B-2, each with a maximum surface coating capacity of six (6) gallons of primer per hour; and
- (b) Two (2) Telkamp manual paint spray booths, identified as B-5 and B-6, each with a maximum surface coating capacity of three (3) gallons of coatings per hour.

These four booths use dry filters for particulate matter overspray control, are contained within a total enclosure paint tunnel maintained under negative pressure, and use a natural gas fired catalytic thermal oxidizer for VOC control, identified as Cat-OX #1, with a maximum heat input of 0.4 million Btu per hour, and exhausting at one (1) stack, identified as S-OX.

Under 40 CFR 63, Subpart HHHHHH (6H), the coating line is considered part of an affected source.

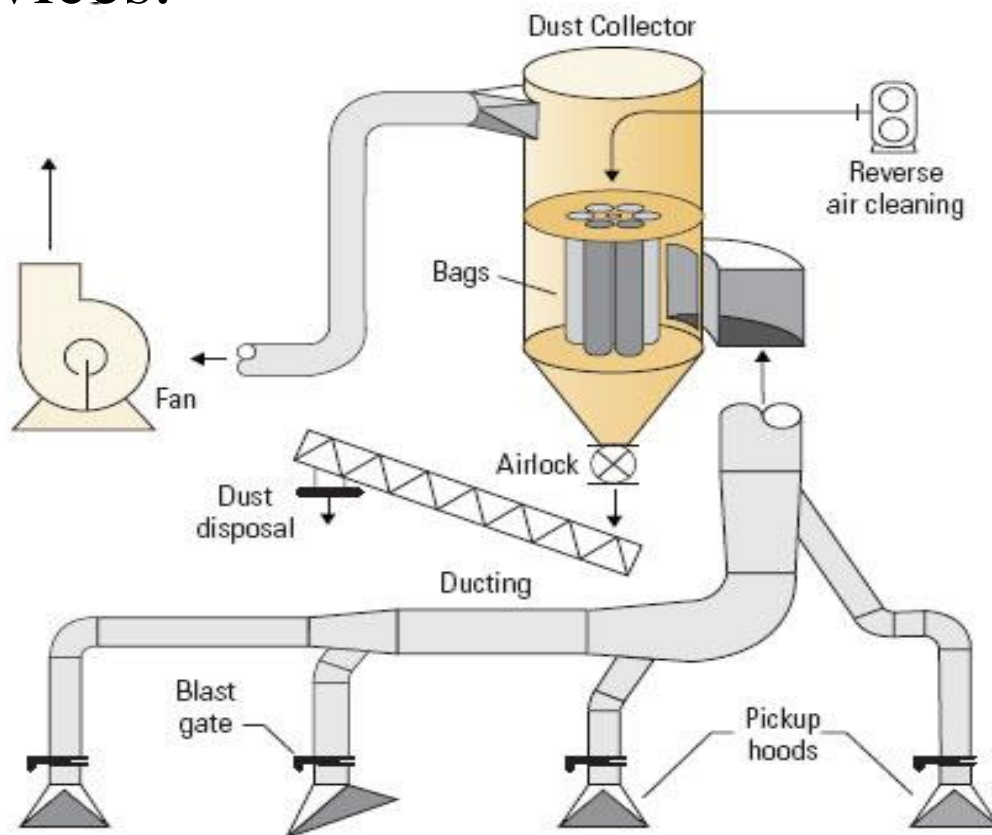
Calculating the Potential to Emit (PTE)

- Calculating PTE
 - Identify all emission units at the source.
 - Identify the pollutants from each emission source.
 - Particulate Matter (PM)(PM10)(PM2.5)
 - Sulfur Dioxide (SO₂)
 - Volatile Organic Compounds (VOC)
 - Carbon Monoxide (CO)
 - Lead (Pb)
 - Hazardous Air Pollutants (HAP)
 - Hydrogen Sulfide (H₂S)
 - Total Reduced Sulfur (TRS)
 - Reduced Sulfur Compounds
 - Fluorides



Calculating the Potential to Emit (PTE)

- Calculated before the use of air pollution control devices.





Calculating the Potential to Emit (PTE)

- Calculated before the use of air pollution control devices.
 - PTE is determined based on emissions prior to the control device, unless the control device is determined to be "integral" to the process.
 - A source must formally request that an integral determination be completed by IDEM.
 - A source must provide a justification for why the controls should be considered integral. Potential factors may include:
 - Controls are necessary for product recovery.
 - Product recovery results in a large economic benefit.
 - Equipment would fail without the use of the controls.
 - Controls would be operated for proper functioning of equipment even if there were no air regulations to comply with for that unit.



Calculating the Potential to Emit (PTE)

Calculated before the use of air pollution control devices –
woodworking is the exception!



- *In October 1993, a Final Order Granting Summary Judgment was signed by Administrative Law Judge (“ALJ”) Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined **that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls.** Based on this ruling, potential particulate matter emissions from the woodworking operations were calculated after control by the Sawdust Distribution System **for purposes of determining operating permit level and 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-2 (PSD) applicability.**



Calculating the Potential to Emit (PTE)

- Select an appropriate method for calculations for each emission unit.
 - Test Data Method
 - Material Balance Approach
 - Manufacturer or Vendor Provided Data
 - Source-specific Model
 - Emission Factor Method
 - Worst-case Scenario

Calculating the Potential to Emit (PTE)

- Test Data Method
 - Collecting emission samples from each emission unit while its in operation (typically at maximum capacity).
 - Most accurate method
 - Most expensive method
 - Time-consuming
 - Prior to conducting a test, companies should contact IDEM, Office of Air Quality (OAQ) Compliance Branch to verify whether the test methods and protocols will be acceptable to determine emissions rates from the emissions unit.





Calculating the Potential to Emit (PTE)

- Test Data Method

- Information on IDEM's website at:

- <http://www.in.gov/idem/airquality/2410.htm>

- Stack Test Protocol Forms and Guidance

- [Environmental Consultants List](#)

- [Indiana's Administrative Code for Source Sampling Procedures for Stack Testing 326 IAC 3-6](#)

- [Stack Test Guide](#)





Calculating the Potential to Emit (PTE)

- Material balance approach

- Comparison of weight of materials placed into the unit and the weight of remaining materials.
 - Appropriate for units losing a measurable amount of material to the atmosphere.
 - Often used for estimating losses of VOC.
- Does not work well:
- When part of the material to be measured becomes part of the product (unless the amount becoming part of the finished product is known).
 - Or when it is difficult to maintain accurate records.





Calculating the Potential to Emit (PTE)

- Manufacturer or vendor provided data
 - Often combined with the use of emission factors.
 - Design rating capacities, process capacity data (like material usage), and safety data sheets (SDS) or environmental data sheets (EDS) for products (like surface coating materials).
 - Can be in the form of performance guarantees or actual emissions testing of similar equipment.





Calculating the Potential to Emit (PTE)

- Source-specific model
 - Set of emission equations for a specific industrial operation.
 - Limited to a small number of industrial operations.
 - Example is the U.S. EPA TANKS Emissions Estimation Software, Version 4.09D.

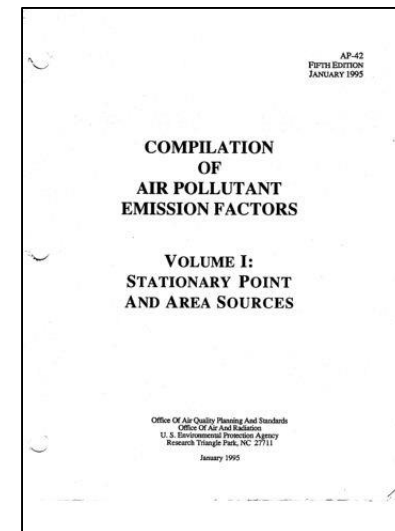
TANKS Emissions Estimation Software, Version 4.09D

****The TANKS model was developed using a software that is now outdated. Because of this, the model is not reliably functional on computers using certain operating systems such as Windows Vista or Windows 7. We are anticipating that additional problems will arise as PCs switch to the other operating systems. Therefore, we can no longer provide assistance to users of TANKs 4.09d. The model will remain on the website to be used at your discretion and at your own risk. We will continue to recommend the use of the equations/algorithms specified in AP-42 Chapter 7 for estimating VOC emissions from storage tanks. The equations specified in AP-42 Chapter 7 (<https://www.epa.gov/ttn/chief/ap42/ch07/index.html>) can be employed with many current spreadsheet/software programs.*



Calculating the Potential to Emit (PTE)

- Emission factor method
 - Most common method used.
 - Emission factors recognized from U.S. EPA's Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP-42 manual) or other U. S. EPA approved emissions factors.
 - Representative factors for numerous emission units.
 - Emission factor provides relationship between an air emission and a production rate (lb./gallon).
 - Not all emissions units are represented.





Calculating the Potential to Emit (PTE)

- Worst-case scenario method
 - Often used when other methods are not available.
 - Assumes all input equals output (none retained in product or process).
 - Can be back calculating (baghouse outlet grain loading).
 - Assumes all PM = PM₁₀/PM_{2.5}.



Note: Always use worst case for throughput and capacity when calculating PTE for a unit. This method of worst case additionally assumes all input equals output (so technically “double” worst case).



Calculating the Potential to Emit (PTE)

Performing the calculations for unrestricted PTE

Calculate unrestricted potential to emit on the basis of the following:

- Operating 24 hours/day, 365 days/year (8,760 hours).
- Operating at the maximum design capacity given by manufacturer or supplier.
- Operating without add-on pollution control equipment.
- Using “worst case”—if there are two scenarios (e.g., source can alternate between using gas boiler and coal-fired boiler), use the worst emitter for each pollutant (i.e., gas-fired for NO_x, coal-fired for other pollutants) full time. Apply the same reasoning with computations involving surface coatings.

Perform separate calculations for *each* regulated pollutant and *each* HAP from *each* emissions unit. Find the total PTE for *each* pollutant emitted by your source. Save all calculations.

NOTE: If a business has equipment located at multiple properties and the combined PTE from the equipment exceeds the permit threshold, the business should work with the OAQ permit staff to obtain a **source determination** for those properties.



Calculating the Potential to Emit (PTE)

Example Calculation Summary Sheet

Unlimited Potential to Emit (tons/year) Before Integral Woodworking Controls*										
Emissions Unit	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Highest Single HAP	
Wood-fired Boiler	0.22	0.20	0.18	0.01	0.27	0.01	0.33	0.02	0.01	Hydrogen Chloride
Woodworking Operations	9.20	5.26	5.26	-	-	-	-	-	-	-
Sawdust Handling	0.21	0.07	0.07	-	-	-	-	-	-	-
Unpaved Roads	1.27	0.32	0.03	-	-	-	-	-	-	-
Total	10.68	5.65	5.36	0.00	0.00	0.00	0.00	negl.	negl.	negl.
Unlimited Potential to Emit (tons/year) After Integral Woodworking Controls*										
Emissions Unit	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Highest Single HAP	
Wood-fired Boiler	0.22	0.20	0.18	0.01	0.27	0.01	0.33	0.02	0.01	Hydrogen Chloride
Woodworking Operations	0.46	0.26	0.26	-	-	-	-	-	-	-
Sawdust Handling	0.21	0.07	0.07	-	-	-	-	-	-	-
Unpaved Roads	1.27	0.32	0.03	-	-	-	-	-	-	-
Total	2.16	0.87	0.55	0.01	0.27	0.01	0.33	0.02	0.01	Hydrogen Chloride
Exemption Thresholds	< 5	< 5	< 5	< 10	< 10	< 10	< 25	< 25	< 10	
Registration Thresholds	≥ 5 and < 25	≥ 5 and < 25	≥ 5 and < 25	≥ 10 and < 25	≥ 10 and < 25	≥ 25 and < 104	≥ 10 and < 25	< 25	< 10	



Calculating the Potential to Emit (PTE)

Example Calculation Summary Sheet

Potential To Emit - Before Controls

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Preblending Operations	2.17	1.45	1.45	0.00	0.00	0.51	0.00	0.00	(Hexane) 0.03
Automatic Feeder Systems	205.81	102.90	102.90	0.00	0.00	0.00	0.00	0.00	
Extruders	0.00	0.00	0.00	0.00	0.00	69.71	0.00	0.00	
Pelletizing Operations	0.00	0.00	0.00	0.00	0.00	20.91	0.00	0.00	
Process Heaters	0.03	0.12	0.12	0.01	1.58	0.09	1.32	0.03	
Totals	208.00	104.47	104.47	0.01	1.58	91.21	1.32	0.03	

Potential To Emit - Before Controls & With Limits

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Preblending Operations	2.17	1.45	1.45	0.00	0.00	0.51	0.00	0.00	(Hexane) 0.03
Automatic Feeder Systems	97.41	97.41	97.41	0.00	0.00	0.00	0.00	0.00	
Extruders	0.00	0.00	0.00	0.00	0.00	68.90	0.00	0.00	
Pelletizing Operations	0.00	0.00	0.00	0.00	0.00	20.91	0.00	0.00	
Process Heaters	0.03	0.12	0.12	0.01	1.58	0.09	1.32	0.03	
Totals	99.61	98.98	98.98	0.01	1.58	90.40	1.32	0.03	

Potential To Emit - After Controls

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Single Highest HAP
Preblending Operations	0.002	0.001	0.001	0.00	0.00	0.51	0.00	0.00	(Hexane) 0.03
Automatic Feeder Systems	0.206	0.103	0.103	0.00	0.00	0.00	0.00	0.00	
Extruders	0.00	0.00	0.00	0.00	0.00	68.90	0.00	0.00	
Pelletizing Operations	0.00	0.00	0.00	0.00	0.00	20.91	0.00	0.00	
Process Heaters	0.03	0.12	0.12	0.01	1.58	0.09	1.32	0.03	
Totals	0.24	0.22	0.22	0.01	1.58	90.40	1.32	0.03	



Calculating the Potential to Emit (PTE) Example Calculation Summary Sheet

Uncontrolled Potential to Emit (tons/yr)								
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	Total HAPs
Surface Coating	8.023	8.023	8.023	--	--	21.722	--	2.300
Abrasive Blasting	478.822	411.787	411.787	--	--	--	--	8.379
Degreasing	--	--	--	--	--	5.387	--	0.054
Natural Gas Combustion	0.089	0.357	0.357	0.028	4.692	0.258	3.941	0.089
Welding	0.018	0.018	0.018	--	--	--	--	0.002
Emergency Fire Pump	0.072	0.072	0.072	0.067	1.008	0.082	0.217	0.001
New Injection Molding								
Total	487.02	420.26	420.26	9.48E-02	5.70	27.45	4.16	10.82
* PM2.5 listed is direct PM2.5								
Potential to Emit after Issuance (tons/yr)								
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	Total HAPs
Surface Coating	8.023	8.023	8.023	--	--	21.722	--	2.300
Abrasive Blasting	4.070	4.070	4.070	--	--	--	--	8.379
Degreasing	--	--	--	--	--	5.387	--	0.054
Natural Gas Combustion	0.089	0.357	0.357	0.028	4.692	0.258	3.941	0.089
Welding	0.018	0.018	0.018	--	--	--	--	0.002
Emergency Fire Pump	0.072	0.072	0.072	0.067	1.008	0.082	0.217	0.001
New Injection Molding								
Total	12.27	12.54	12.54	9.48E-02	5.70	27.45	4.16	10.82



Calculating the Potential to Emit (PTE)

Example Calculation Summary Sheet - Modification

Uncontrolled Potential to Emit Of the Modification (tons/yr)

Process	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total HAPs	Worst single HAP	
Flat Line Panel Brush	0.00	0.00	0.00	-	-	-	-	-	-	-
Flat Panel Coating Line	31.29	31.29	31.29	-	-	13.85	-	-	-	-
Coating Touchup Booth	3.13	3.13	3.13	-	-	1.39	-	-	-	-
Flat Line Air Makeup Unit	APT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	Hexane
Total (Modification Level SSM)	34.42	34.42	34.42	0.00	0.00	15.24	0.00	0.00	0.02	Hexane

New Source-wide Unlimited Potential to Emit (tons/yr)

Process	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total HAPs	Worst single HAP	
Surface Coating Booths	16.78	16.78	16.78	-	-	164.78	-	14.27	8.92	Toluene
Urethane Machining	45.05	45.05	45.05	-	-	-	-	-	-	-
Woodworking	0.23	0.23	0.23	-	-	-	-	-	-	-
Polyurethane Machining	-	-	-	-	-	0.19	-	0.097	0.097	MDI
Storage Tanks	-	-	-	-	-	0.0007	-	0.00001	0.00001	MDI
Emergency Generator	0.000001	0.000127	0.000127	0.000007	0.052020	0.001505	0.004042	0.0009	0.0007	Formaldehyde
Resin Transfer Molding	0.00	0.00	0.00	-	-	4.89	-	3.99	3.73	Styrene
FIT Gel Coating Application Booth	1.14	1.14	1.14	-	-	4.78	-	3.76	3.76	Styrene
Mold Preparation Operation	-	-	PTE	-	-	3.96	-	-	-	-
Reciprocator and Portable FIT Gel Coat Application	0.00	0.00	0.00	-	-	102.52	-	102.52	102.52	Styrene
Portable FIT Gel Coat Application	-	-	-	-	-	11.44	-	-	-	-
Hand Grinding	18.77	18.77	18.77	-	-	-	-	-	-	-
portable chop gun	-	-	-	-	-	10.12	-	2.23	2.23	Styrene
plastic part flow coating operation	-	-	-	-	-	1.37	-	1.37	1.29	MDI
Space Heaters	0.05	0.20	0.20	0.02	2.68	0.15	2.25	0.05	0.05	Hexane
ovens	0.03	0.11	0.11	0.01	1.49	0.08	1.25	0.03	0.03	Hexane
Water Jet Cutter *	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.	-
Flat Line Panel Brush	5.26	5.26	5.26	-	-	-	-	-	-	-
Flat Panel Coating Line	87.05	87.05	87.05	-	-	36.03	-	-	-	-
Coating Touchup Booth	3.18	3.18	3.18	-	-	1.45	-	-	-	-
Flat Line Air Makeup Unit	0.02	0.09	0.09	0.01	1.16	0.06	0.97	0.02	0.02	Hexane
Total	177.56	177.86	177.86	0.03	5.38	341.84	4.48	128.35	110.02	Styrene

negl. = negligible

* Water material is used for the jet cutter, therefore, emissions are assumed to be negligible.

Note: Based on this ruling (Cause Nos. 92-A-J-730 and 92-A-J-833), potential emissions for particulate matter from woodworking operations were calculated after consideration of the controls for determining operating permit level purposes and PSD applicability.



The Physical and Operational Design

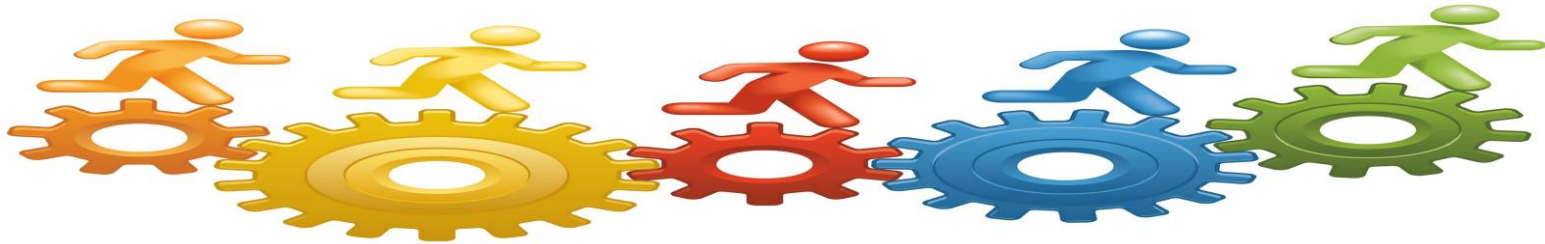
- To calculate the PTE accurately, it is important to have an understanding of the process and operational design of the specific source.
- There are three general categories of physical and operational design factors that are important to be aware of when calculating PTE:
 - Operational or process designs that have inherent limitations or bottlenecks;
 - Non-continuous operations; and
 - Equipment that performs a process function and reduces emissions as a secondary effect of their existence (i.e., controls that are integral to the process).

Inherent Limitations or Bottlenecks

- Limitations in the source's ability to operate at a maximum rate should be taken into account.
- Bottlenecks in process lines are an obvious example of this type of limitation.
- For instance, if a source is melting aluminum scrap to then be cast into widgets, the production of the widgets cannot proceed any faster than the slowest step in the process.



Inherent Limitations or Bottlenecks



- If the casting process is hindered by its capacity to generate molds, then the source cannot melt aluminum faster than molds can be prepared to accept the molten metal.
- In calculating the PTE of an associated furnace, the capacity of the slower mold making process should be taken into account and calculated based on the slower casting line.



Inherent Limitations or Bottlenecks

- Consideration must be taken to determine TRUE bottlenecks
- For instance, in the case of a slower mold process the source may purchase molds.
- If this is the case, mold making would not be a bottleneck for the furnace.
- Other examples of bottlenecks are a pump that operates slower than the next piece of process equipment; or a curing oven with a capacity smaller than the coating operation that feeds the oven.



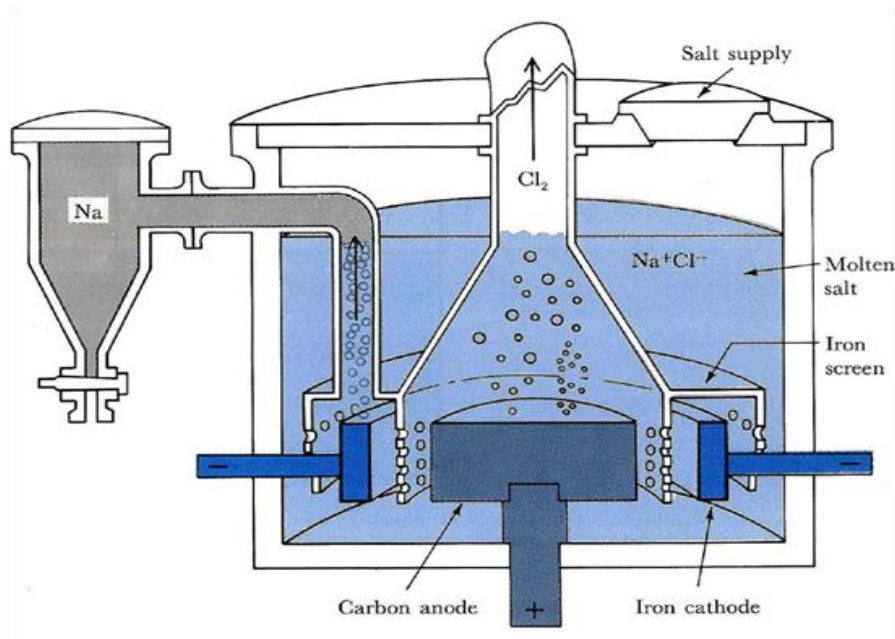


Inherent Limitations or Bottlenecks

- The way a source operates can also limit their maximum capacity to emit.
 - This would include the types of coating materials used, raw materials or fuels used.
 - For example, a source that only burns natural gas in their boiler has a lower PTE for SO₂ than one that also burns oil.
- A boiler might be physically able to burn oil and natural gas, but if the source has no oil storage, their PTE would be based on just burning the natural gas.

Inherent Limitations or Bottlenecks

- Similarly, if a chemical process can use either xylene or water as the solvent in one of the process steps, but the source always operates using water, not xylene, then the PTE of xylene for this process should not be calculated.





Inherent Limitations or Bottlenecks

- Examples of factors that are **NOT** considered physical limitations and would not be considered when determining the PTE for a source:
 - Operating 1 shift per day;
 - Lack of storage space;
 - Limited manpower; or
 - Market demand.



Non-Continuous Operations

- Non-continuous operations present a dilemma in calculating PTE because of the scale-up to an annual value.
- As discussed, the PTE is generally calculated based on the maximum design capacity, operated 8,760 hours per year.
- However, the actual use of the equipment could be much smaller.



Non-Continuous Operations

- In certain hours of a non-continuous operation there could be a very high emissions rate, but then several hours where little or no pollutants are emitted.
- During the hours of low emissions the source may be conducting steps that are necessary to make their product.
- It may not be appropriate to calculate the PTE by multiplying the maximum hourly emissions by 8,760 hours per year because that would not take into account the other steps of the process.





Non-Continuous Operations

- Non-continuous operations are a type of inherent operational design limitation.
- The source cannot make their product unless they carry out all the steps.
- Depending on how the source operates, they may carry out each step one at a time, not starting the next step until the previous one is completed.
- This means that not all of their process equipment is operated at all times and may stand idle at times.



Non-Continuous Operations

- The EPA has provided specific guidance on three types of non-continuous operations:
 - Emergency Generators;
 - Country Grain Elevators; and
 - Batch Chemical Production Operations.





Exercise 1 – ABC Corp. Determine “Emission Units”

Step 1: What are the “emissions units” at ABC Corporation?

The first step in determining the PTE for a source (in this case, ABC Corporation) is to determine what activities or processes are present that are considered "emission units." An “emissions unit” is defined as “any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant under the CAA and/or 326 IAC 1-2-23.5.”

An “emission unit” may be an individual machine or it may be a process.



Exercise 1 – ABC Corp. Determine “Emission Units”

Although many processes may be considered emission units of some sort, it is necessary to determine which units need to have PTE calculated for air pollutants?

Look through the list and choose which units will need PTE calculations





Exercise 1 – ABC Corp.

Determine “Emission Units”

- One (1) Natural Gas -fired Boiler, with No.2 fuel oil as back-up, rated at 30 MMBtu/hr
- One (1) Cold Cleaner/Degreaser
- Gasoline Combustion mobile sources (i.e. lawn mowing/yard care)
- Oil use (hydraulic and lubricating oil in equipment)
- Abrasive blasting
- Blowdown for any of the following: sight glass, boiler, compressor, pump or cooling tower.
- Heat exchanger cleaning and repair;
- Closed loop heating and cooling systems;
- Natural gas heating units less than 10 MMBtu/hr (1 natural gas fired spray booth drying oven rated at 6 MMBtu/hr, three (3) natural gas space heating units - each rated at 0.75 MMbtu/hr, 1 air-make up unit rated at 5 MMBtu/hr, and 1 process tank heater rated at 1 MMbtu/hr).
- One (1) Primer Booth
- One (1) Paint Booth
- Maintenance Welding Operations
- A Laboratory (Trichloroethylene used and grinding units)
- Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1%;
- Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures or vehicles at the source where air emissions from those activities would not be associated with any production process.



Exercise 1 – ABC Corp.

Determine “Emission Units”

- ✓ One (1) Natural Gas -fired Boiler, with No.2 fuel oil as back-up, rated at 30 MMBtu/hr
- ✓ One (1) Cold Cleaner/Degreaser
 - Gasoline Combustion mobile sources (i.e. lawn mowing/yard care)
 - Oil use (hydraulic and lubricating oil in equipment)
- ✓ Abrasive blasting
 - Blowdown for any of the following: sight glass, boiler, compressor, pump or cooling tower.
 - Heat exchanger cleaning and repair;
 - Closed loop heating and cooling systems;
- ✓ Natural gas heating units less than 10 MMBtu/hr
- ✓ One (1) Primer Booth
- ✓ One (1) Paint Booth
- ✓ Maintenance Welding Operations
 - A Laboratory (Trichloroethylene used and grinding units)
 - Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
 - Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1%;
 - Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures or vehicles at the source where air emissions from those activities would not be associated with any production process.



Exercise 1 – ABC Corp. Determine “Emission Units”

Emissions from some emission units are so small, that determining the PTE for that unit will not likely impact the permit status of the source. Therefore, emissions from these units may be disregarded unless it is determined that such emissions may alter the facility permit status.

For this exercise, we can safely disregard the emissions from:

- Blowdown for any of the following: sight glass, boiler, compressor, pump or cooling tower.
- Heat exchanger cleaning and repair;
- Closed loop heating and cooling systems;
- Gasoline Combustion mobile sources (i.e. lawn mowing/yard care) (mobile sources are not regulated by permitting)
- Oil use (hydraulic and lubricating oil in equipment)
- A Laboratory (Trichloroethylene used and grinding units)
- Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- Activities associated with the treatment of wastewater streams
- Purging of gas lines and vessels



Exercise 1 – ABC Corp. Boiler – Natural Gas

Step 1:

Potential Throughput (MMCF) = Heat Input Capacity
(MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

$$30 \text{ (MMBtu/hr)} \times 8,760 \text{ (hrs/yr)} \times 1 / 1,020 \text{ (MMCF/MMBtu)} = 257.6 \text{ MMCF}$$

Step 2:

Emission (tons/yr) = Throughput (MMCF/yr) x Emission
Factor (lb/MMCF) x 1/2,000 (ton/lb)

$$257.6 \text{ (MMCF)} \times \text{EF (lb/MMCF)} \times 1/2,000 \text{ (ton/lb)} = \text{X (tons/year)}$$



Exercise 1 – ABC Corp. Boiler – Fuel Oil

Step 1:

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr)
x 8,760 (hrs/yr) x 1/1000 (kgal/gal) x 1/0.140 (gal/MMBtu)

$$30 \text{ (MMBtu/hr)} \times 8,760 \text{ (hrs/yr)} \times 1 / 1,000 \text{ (Kgal/gal)} \times 1/0.140 \text{ (gal/MMBtu)} = 1,877.1 \text{ Kgals/yr}$$

Step 2:

SO₂ Emission Factor = Weight % Sulfur x 142

$$S = 142 \times 0.5$$

Step 3:

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor
(lb/kgal) x 1/2,000 (lb/ton)

$$1,877.1 \text{ (Kgals/yr)} \times \text{EF (lb/Kgal)} \times 1/2,000 \text{ (ton/lb)} = X \text{ (tons/year)}$$



Exercise 1 – ABC Corp. Degreasing

Step 1:

Emissions TPY = Solvent Density (lb/gal) x Annual
Throughput (gal/yr) x Weight % VOC x 1/2,000 (ton/lb)

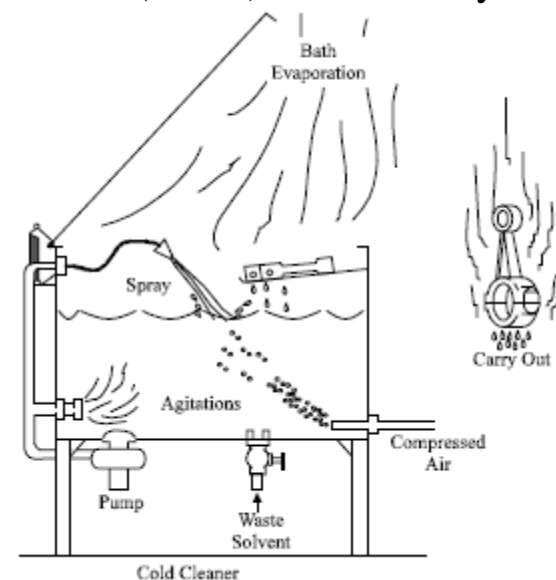
$$6.8 \text{ (lbs/gal)} \times 145 \text{ (gal/yr)} \times 100 \text{ (weight \% VOC)} \times 1/2,000 \text{ (ton/lb)} = 0.49 \text{ tons/yr}$$

Step 2:

Compare to EPA Emission Factors for unit type

Step 3:

Determine which emissions scenario is best



Note: Several other methods for calculating degreasing emissions, this represents the “easiest” worst case method. (See Excerpt)



Exercise 1 – ABC Corp. Abrasive Blasting

Step 1:

Potential to Emit (lb/hr) = Emission Factor (lb pm/lb abrasive) x Flow Rate of abrasive out of nozzle (lb/hr) x (1 - w/200) x N (# of nozzles) (where w (fraction time of wet blasting) should be entered in as a whole number (if w is 50%, enter 50))

$$0.041 \text{ (lbs PM/lb Ab)} \times 1 \text{ (lb/hr)} \times (1 - 0/200) \times 1 = 0.04 \text{ PM lbs/hr}$$

Step 2:

Potential to Emit (tons/year) = Potential to Emit (lbs/hour) x 8760 (hrs/yr) x 1/2,000 (ton/lbs)

$$0.04 \text{ (lb/hr)} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = 0.18 \text{ PM tons/yr}$$

Step 3:

Solve for after control PTE if desired

$$0.18 \text{ (PM tons/yr)} \times (1 - 60\%) = 0.072 \text{ PM tons/yr}$$



Exercise 1 – ABC Corp.

Natural Gas Combustion – Insignificant Units

Step 1:

List all insignificant natural gas combustion unit capacities (MMBtu/hr) and add together = (Total Heat Input Capacity)

$$6 + 0.75 + 0.75 + 0.75 + 0.75 + 5 + 1 = 14.25 \text{ MMBtu/hr}$$

Step 2:

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 (hrs/yr) x 1/1,020 (MMCF/MMBtu)

$$14.25 \text{ (MMBtu/hr)} \times 8,760 \text{ (hrs/yr)} \times 1 / 1,020 \text{ (MMCF/MMBtu)} = 122.4 \text{ MMCF}$$

Step 3:

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) 1/2,000 (lb/ton)

$$122.4 \text{ (MMCF)} \times \text{EF (lb/MMCF)} \times 1/2,000 \text{ (ton/lb)} = X \text{ (tons/year)}$$



Exercise 1 – ABC Corp.

Welding

Step 1:

Enter Number of Stations (N) and Max. electrode consumption per station (lbs/hr) for each welding process type

Step 2:

Welding emissions (lb/hr): N (stations) x electrode use (lb/hr/station) x emission factor (lb. pollutant/lb. of electrode used)

$$\text{MIG PM} = 1 \times 3 \text{ (lb elec/hr)} \times 0.0055 \text{ (lb pm/ lb elec)} = 0.017 \text{ lb pm/hr}$$

$$\text{TIG PM} = 4 \times 10 \text{ (lb elec/hr)} \times 0.0055 \text{ (lb pm/ lb elec)} = 0.22 \text{ lb pm/hr}$$

Step 3:

Welding emissions (tons/yr) = emissions (lb/hr) x 8,760 (hrs/year) x 1/2,000 (ton/lbs)

$$0.017 \text{ (lb pm/hr)} + 0.22 \text{ (lb pm/hr)} = 0.24 \text{ lb pm/hr}$$

$$0.24 \text{ (lb pm/hr)} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = 1.04 \text{ tons/yr}$$



Exercise 1 – ABC Corp.

Surface coating (primer and paint) VOC

Step 1: lbs VOC/Gallon Coating = Density (lb/gal) x Weight % Org

$$\text{Primer} = 2.71 \text{ (lb/gal)} \times 61.5\% = 1.67 \text{ lb VOC/gal}$$

$$\text{Green} = 10.85 \text{ (lb/gal)} \times 26\% = 2.82 \text{ lb VOC/gal}$$

$$\text{Red} = 15.32 \text{ (lb/gal)} \times 87.2\% = 13.36 \text{ lb VOC/gal}$$

Step 2: Potential VOC (tons/yr) = lbs VOC/Gallon Coating (lb/gal) x
Gal of Material (gal/unit) * Maximum Production (units/hr) x 8760
(hrs/yr) x 1/2,000 (tons/lb)

$$\text{Primer} = 1.67 \text{ (lb VOC/gal)} \times 0.15 \text{ (gal/unit)} \times 15 \text{ (unit/hr)} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = 16.42 \text{ tons/yr}$$

$$\text{Green} = 2.82 \text{ (lb VOC/gal)} \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = 77.22 \text{ tons/yr}$$

$$\text{Red} = 13.36 \text{ (lb VOC/gal)} \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = 365.79 \text{ tons/yr}$$



Exercise 1 – ABC Corp.

Surface coating (primer and paint) PM

Step 4: Determine Transfer Efficiency for type of paint application

HVLP = 75%

Step 5: Particulate Potential (Tons/Year) = Density (lb/gal) x (1-Weight % Volatiles) x Material Used (gal/unit) x Max Production (units/hr) x (1-Transfer efficiency) x 8760 (hrs/yr) x 1/2,000 (ton/lbs)

Primer = $2.71 \text{ (lb/gal)} \times (1-61.5\%) \times 0.15 \text{ (gal/unit)} \times 15 \text{ (unit/hr)} \times (1-75\%) \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)}$
= 2.57 tons/yr

Green = $10.85 \text{ (lb/gal)} \times (1-26\%) \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times (1-75\%) \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)}$
= 54.95 tons/yr

Red = $15.32 \text{ (lb/gal)} \times (1-88.9\%) \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times (1-75\%) \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)}$
= 11.64 tons/yr



Exercise 1 – ABC Corp.

Surface coating (primer and paint) - HAPs

Step 1: Determine HAPS - Enter Weight % each HAP

Note: HAP values in a range, enter highest value from SDS

Step 2: PTE of HAPs (ton/yr) = Density (lb/gal) x Usage rate (gal/unit) x Maximum Production (unit/hr) x Weight % HAPs x 8760 (hrs/yr) x 1/2000 (tons/lbs)

Primer = $2.71 \text{ (lb/gal)} \times 0.15 \text{ (gal/unit)} \times 15 \text{ (unit/hr)} \times \% \text{HAP} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = \text{Individual HAP tons/yr}$

Green = $10.85 \text{ (lb/gal)} \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times \% \text{HAP} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = \text{Individual HAP tons/yr}$

Red = $15.32 \text{ (lb/gal)} \times 0.25 \text{ (gal/unit)} \times 25 \text{ (unit/hr)} \times \% \text{HAP} \times 8760 \text{ (hr/yr)} \times 1/2,000 \text{ (ton/lb)} = \text{Individual HAP tons/yr}$



Exercise 1 – ABC Corp.

Surface coating (primer and paint) - HAPs

- You must use the worst case for each pollutant, even if it would not be physically possible to emit the combination of pollutants in a year. The PTE would be:

	VOC	PM	Xylene	Toluene	Total HAP
Red Paint	366	12	0	5.9	10.5
Green Paint	77	55	4.2	0	5.9
Primer	add	add	9.6	0	13

- Note that if you just used the red coating to determine the PTE for all the pollutants, you would not have seen that the source is a major source of HAPs for Xylene.



Exercise 1 – ABC Corp. Calculating the PTE - Summary

Step 1: Enter all values into summary table (worst case scenario)

Step 2: Sum all pollutants (tons/yr) and each single HAP

Step 3: Compare to thresholds / Determine Permit Level





Construction and Operation of New Sources

- Permits
 - IDEM issues and enforces all permits.
 - U.S. EPA has enforcement capability for federal regulations and state regulations that have been approved into the state implementation plan (SIP).
 - Types of permits:
 - Major source – federal permit
 - Minor source – state permit





Construction and Operation of New Sources

Permit Types

- State
 - Exemptions (326 IAC 2-1.1-3)
 - Registrations (326 IAC 2-5)
 - Minor Source Operating Permit (MSOP) (326 IAC 2-6.1)
- Federal
 - Part 70 Permit (Title V) (326 IAC 2-7)
 - Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8)
 - Source Specific Operating Agreement (SSOA) (326 IAC 2-9)
 - Permit by Rule (326 IAC 2-10 or 2-11)

Note: All permits are issued by the state (IDEM).



Construction and Operation of New Sources

- Permits

- Who needs an air approval?

- Any source that has the potential to emit one or more regulated pollutants may be required to apply for an air approval prior to construction and operation.



- Who does not need an air approval?

- A source that does not emit any regulated pollutants; or
 - A source that has the potential to emit only very small amounts of air pollutants.





Construction and Operation of New Sources

- Permitting level generally determined by source's potential to emit (PTE) - type of activities a source performs may also affect the approval level.
- Permit must be issued before the source may begin construction (new sources).
- Minor sources may do some construction activities listed in 326 IAC 1-2-21 prior to permit issuance (construction definition).
- IDEM merged the construction and operating permitting programs in 1998 (new sources).



Modification of Existing Sources

Sources planning to construct and operate a modification to a source resulting in potential emissions exceeding the applicability threshold levels for a modification must obtain regulatory agency approval through the appropriate modification program.

- Permitting level determined by source's potential to emit (PTE) after the change.
- Modification level determined by increase in potential to emit (PTE).
- Permit must be issued before the source may begin construction of new units (unless exempt).



Modification of Existing Sources

- A modification to an existing source or emissions unit is:
 - A physical change, or change in the method of operation, of any existing emissions unit that increases the potential to emit any regulated pollutant, or resulting in emissions of any regulated pollutant not previously emitted.
 - Construction of one or more new emissions units having the potential to emit regulated air pollutants.
 - Reconstruction of one or more existing emissions units increasing the potential to emit any regulated air pollutant (not emergency repair/replacement).





Air Permitting Approvals

Who is required to submit an application?

Sources subject to the following:

- ✓ Registration
- ✓ MSOP
- ✓ Part 70



Source submits
application

Each of these permit levels require that the source submit an application to IDEM.

- Sources that qualify for an **exemption** are **not required** to submit an application to IDEM, but may submit an application in order to be issued an exemption letter.



Air Permitting Approvals – Application Forms

- All permit application forms are available on [IDEM's forms](#) page.
- There are [special application](#) instructions for renewal permits and application forms for BACT, MACT, Interim Approvals, Emission Credit Registry, Acid Rain permits, etc.
- An applicant must fill out the forms needed to fully describe the operations and emissions at the source.
- The application consists of various forms covering the source in general and specific operations.
- The permit application may be submitted in any format as long as you provide the required information.





Air Permitting Approvals - Electronic Submittal Not Yet for OAQ

Electronic Permitting

IDEM has a Regulatory Services Portal (RSP), part of the myIDEM on-line experience. RSP provides a web portal for the regulated community to electronically interface with IDEM.

[Regulatory Services Portal IESA Account login page](#): The RSP service is designed to make it easier for customers to electronically submit notifications, applications and data.

Unfortunately, this is not yet available for air permit applications.

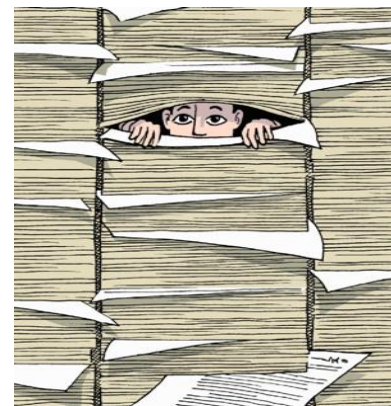




Air Permitting Approvals – Application Forms

The main forms are:

- General Source Data (GSD)
- Process Information (PI)
- Control Equipment (CE)
- Compliance Determination (CD) (for Title V sources)
- Others - MACT, NSPS, NESHAP or CAM (FED)



Confidential Information

- All information submitted to IDEM is considered public record.
- A claim of confidentiality must be made at the time the application is submitted.
- A claim of confidentiality must follow the requirements set out in 326 IAC 17.1-4-1 and include information to support the claim.
- IDEM guidance and Nonrule Policy Document Air-031-NPD.





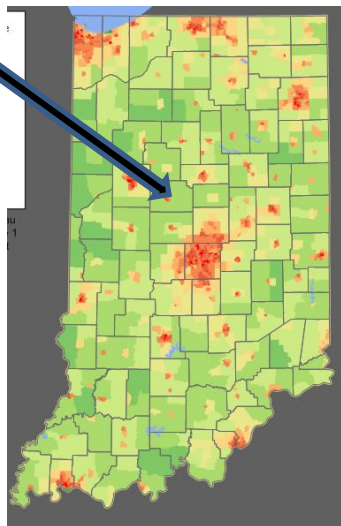
Air Permitting Approvals – Application Forms

- Every application should include, at a minimum:
 - **An Application Cover Sheet (form 50639)**
 - **GSD-01 (form 50640)**

My name is ...

These forms cover basic information such as:

We
are
here



- The name of the source.
- The physical location and mailing address of the new source, including the township and county.
- The name and contact information of the source contact (this is who will be answering permitting questions for the source).
- The name and contact information of the consultant (if any) that prepared the application.
- The type of approval for which they are applying (Part 70 permit, FESOP, etc.)



Air Permitting Approvals – Application Forms

- Every application should include, at a minimum:
 - **An Application Cover Sheet (form 50639)**
 - **GSD-01 (form 50640)**

**AIR PERMIT APPLICATION COVER SHEET**
State Form 50639 (R4 / 1-10)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**NOTES:**

- The purpose of this cover sheet is to obtain the core information needed to process the air permit application. This cover sheet is required for all air permit applications submitted to IDEM, OAQ. Place this cover sheet on top of all subsequent forms and attachments that encompass your air permit application packet.
- Submit the completed air permit application packet, including all forms and attachments, to IDEM Air Permits Administration using the address in the upper right hand corner of this page.
- IDEM will send a bill to collect the filing fee and any other applicable fees.
- Detailed instructions for this form are available on the Air Permit Application Forms website.

1. Tax ID Number: **PART A: Purpose of Application**

Part A identifies the purpose of this air permit application. For the purposes of this form, the term "source" refers to the plant site as a whole and NOT to individual emissions units.

2. Source / Company Name: <input type="text"/>	3. Plant ID: <input type="text"/> – <input type="text"/>
4. Billing Address: <input type="text"/>	
City: <input type="text"/>	State: <input type="text"/> ZIP Code: <input type="text"/> – <input type="text"/>
5. Permit Level: <input type="checkbox"/> Exemption <input type="checkbox"/> Registration <input type="checkbox"/> SSOA <input type="checkbox"/> MSOP <input type="checkbox"/> FESOP <input type="checkbox"/> TVOP <input type="checkbox"/> PBR	
6. Application Summary: Check all that apply. Multiple permit numbers may be assigned as needed based on the choices selected below.	
<input type="checkbox"/> Initial Permit	<input type="checkbox"/> Renewal of Operating Permit
<input type="checkbox"/> Review Request	<input type="checkbox"/> Revocation of Operating Permit
<input type="checkbox"/> Interim Approval	<input type="checkbox"/> Relocation of Portable Source
	<input type="checkbox"/> Asphalt General Permit
	<input type="checkbox"/> Alternate Emission Factor Request
	<input type="checkbox"/> Acid Deposition (Phase II)

IDEM – Office of Air Quality – Permits Branch
100 N. Senate Avenue, MC 61-53 Room 1003
Indianapolis, IN 46204-2251
Telephone: (317) 233-0178 or
Toll Free: 1-800-451-6027 x30178 (within Indiana)
Facsimile Number: (317) 232-6749
www.IN.gov/idem

FOR OFFICE USE ONLYPERMIT NUMBER: DATE APPLICATION WAS RECEIVED: **OAQ GENERAL SOURCE DATA APPLICATION**
GSD-01: Basic Source Level Information
State Form 50640 (R5 / 1-10)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**NOTES:**

- The purpose of GSD-01 is to provide essential information about the entire source of air pollutant emissions. GSD-01 is a required form.
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC 17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record, available for public inspection.

IDEM – Office of Air Quality – Permits Branch
100 N. Senate Avenue, MC 61-53 Room 1003
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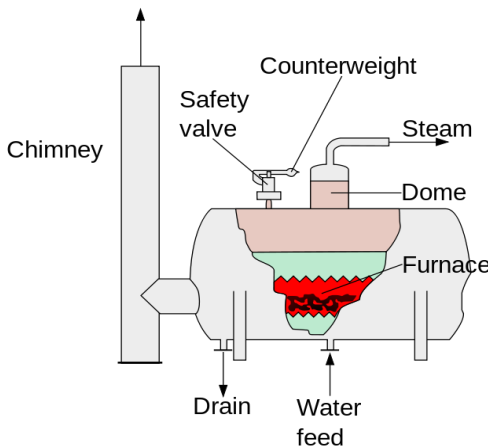
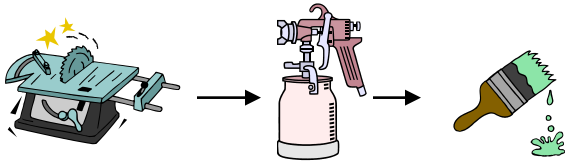
PART A: Source / Company Location Information

1. Source / Company Name: <input type="text"/>	2. Plant ID: <input type="text"/> – <input type="text"/>
3. Location Address: <input type="text"/>	
City: <input type="text"/>	State: <input type="text"/> ZIP Code: <input type="text"/> – <input type="text"/>
4. County Name: <input type="text"/>	5. Township Name: <input type="text"/>
6. Geographic Coordinates:	
Latitude: <input type="text"/>	Longitude: <input type="text"/>
7. Universal Transverse Mercator Coordinates (if known):	
Zone: <input type="text"/>	Horizontal: <input type="text"/> Vertical: <input type="text"/>
8. Adjacent States: Is the source located within 50 miles of an adjacent state?	
<input type="checkbox"/> No <input type="checkbox"/> Yes – Indicate Adjacent State(s): <input type="checkbox"/> Illinois (IL) <input type="checkbox"/> Michigan (MI) <input type="checkbox"/> Ohio (OH) <input type="checkbox"/> Kentucky (KY)	
9. Attainment Area Designation: Is the source located within a non-attainment area for any of the criteria air pollutants?	
<input type="checkbox"/> No <input type="checkbox"/> Yes – Indicate Nonattainment Pollutant(s): <input type="checkbox"/> CO <input type="checkbox"/> Pb <input type="checkbox"/> NO _x <input type="checkbox"/> O ₃ <input type="checkbox"/> PM <input type="checkbox"/> PM ₁₀ <input type="checkbox"/> PM _{2.5} <input type="checkbox"/> SO ₂	
10. Portable / Stationary: Is this a portable or stationary source? <input type="checkbox"/> Portable <input type="checkbox"/> Stationary	

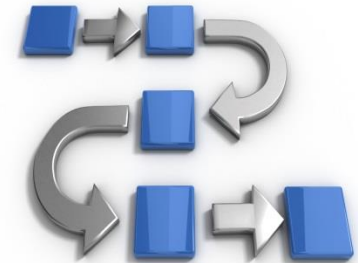
PART B: Source Summary

Air Permitting Approvals – Application Forms

- Other necessary information may include:



- A complete list of the equipment or processes that emit air pollutants, including any sources of fugitive emissions (emission unit descriptions).
- An estimate of the PTE for each unit or process identified.
- A map of the facility.
- A process flow diagram.
- A control device list.
- Stack/vent information.
- Alternate operating scenarios.
- A list of any federal or state rules applicable and identification of the compliance method(s) selected (if applicable).
- Special process information.





Air Permitting Approvals – Application Forms

What should I include in the emission unit description?



- Emission unit identification number;
- Date of construction;
- A description of the type of operation or activity, including the type of material processed (if applicable);
- Maximum operating capacity or throughput;
- Identification of the stack or vent through which the emissions are exhausted;
- Description of any control devices employed; and
- Identification of any federal rules that are applicable.

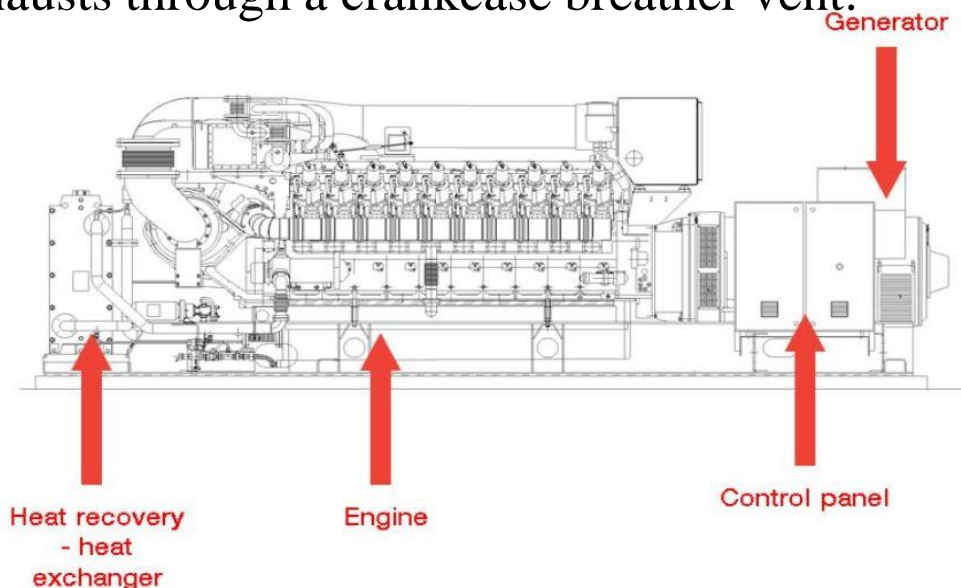


Air Permitting Approvals – Application Forms

Example Emission Unit Description:

Four engines, each rated at 1,148 horsepower (8.9 MMBtu/hr), identified as EG1 through EG4, each constructed in 2005, using treated landfill gas as a fuel, each with a landfill gas input rate of 326 scfm, and exhausting through stacks ES1 through ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 20 gallons of engine oil per month and exhausts through a crankcase breather vent.

[40 CFR 63, Subpart ZZZZ]





Air Permitting Approvals

What is a “Complete Application”?



- A complete application is one that has:
 - Fulfilled the regulatory requirements.
 - Adequately describes the units and emissions at the source.
 - Has been signed by either the responsible official or the authorized individual depending on the level of permit.





Air Permitting Approvals

Don't Forget the Library



- Applicants are required to send one copy of their application (and all supporting documentation) to the library for public review if the permitting action is subject to the public notification provisions in 326 IAC 2-1.1-6
- It must be submitted within 10 days of submitting it to IDEM.
- Applicants must place the copy in a library that is in the same county as their source.



Don't forget notification requirements:
Some construction approvals require that the source identify and notify adjacent landowners and occupants (IC 13-15-8) and local government officials (IC 13-15-3-1).

- New sources GSD 13-15
- Existing sources GSD 12 and 15



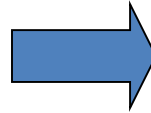
Air Permitting Approvals – Issuance Process Overview



Source submits
application



Administrative
staff assign permit
number and start
the time clock



Assigned to Permit
Writer

(Assigned to review
section based on SIC
code of source)

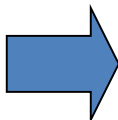


Branch Chief and
Section Chief review
the draft documents
and approves them
for source review

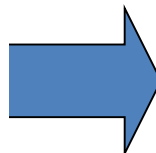
Air Permitting Approvals – Issuance Process Overview



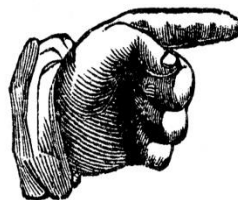
Permit writer
revises draft and
after approval from
Section Chief sends
the draft to the
source for review



Source reviews the
draft documents and
submits comments to
the permit writer – the
permit writer makes
edits and gets internal
approval again for all
documents



Please Notice This



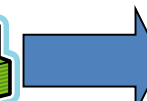
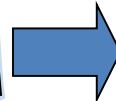
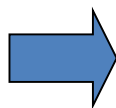
If applicable,
all documents
are sent to
Public Notice
(PN) for 30
days



If applicable,
all documents
are sent to the
U.S. EPA for
45 days (can
run concurrent
with PN)



Air Permitting Approvals – Issuance Process Overview



Occasionally, a **public meeting** or a **formal public hearing** may be held (during PN or after, but prior to permit issuance) to provide concerned citizens with additional information and allow them to ask questions and discuss their concerns with the IDEM officials and source representatives

Permit writer addresses any comments received by the public or the U.S. EPA and drafts an addendum if necessary

All permit documents approved by Branch Chief

Permit fees are paid by the source

Permit is issued



Air Permitting Approvals – Issuance Process Overview

- Within the Permit Review section, the Section Chief assigns the application to a permit reviewer (writer). The permit writer does the following:
 - ☐ Performs a completeness review.
 - ☐ The permit reviewer informs the applicant that work has begun on the application.
 - ☐ The permit reviewer may request additional information. The permit reviewer may issue a Notice of Deficiency (permit accountability clock will stop).
 - ☐ Prepares/Reviews PTE Calculations.
 - ☐ Drafts Technical Support Document (TSD).
 - ☐ Drafts the permitting approval.
 - ☐ Prepares the public notice.
 - ☐ Completes forms (billing, enforcement referrals, etc.)





Air Permitting Approvals – Issuance Process Overview

What do I do if I Receive a **Notice of Deficiency (NOD)**?



The purpose of the NOD is only to attain additional information.

- ✓ Review the request carefully.
- ✓ Ask the permit writer questions if you need additional guidance on what they are requesting from you.
- ✓ Consult with your internal staff to obtain answers.
- ✓ Respond to the permit writer in a timely manner (even if it is just to acknowledge that you have received the request and are working on it).
- ✓ Responses to NODs may be sent by regular mail, facsimile, or email (telephone works, but better to have written record).
- ✓ The permit writer usually sets a response date of 30 days.
- ✓ Pursuant to Non-Rule Policy Document No. AIR-033, the application can be recommended for denial if adequate response is not received within 60 days of the initial NOD.
- ✓ More than one NOD may be sent if adequate responses are not received or more information is needed (but discovered later in the process).

Air Permitting Approvals – Issuance Process Overview



Applicant Review

- The permit reviewer shares the draft of the permit with the applicant before public notice. (The permit writer may share the draft prior to issuance if public notice not required).
- Applicant review typically lasts two weeks.
- The applicant should carefully examine draft and make requests for changes as soon as possible.
- Each permit contains terms and conditions that describe the construction or operating requirements—applicants should ask about any conditions that seem incorrect or cause concern.





Air Permitting Approvals – Issuance Process Overview

Public Notice

Public Notice is a **30-day** public comment period.

IDEM submits the notice to one or more local newspapers to be published.

The notice:

- ✓ Begins the day after the date of publication (30 days begins).
- ✓ Provides information to the public on where copies of the application and draft air approval may be obtained.
- ✓ Requests comments (Anyone can submit comments...the source, members of the public, environmental groups, etc.)





Air Permitting Approvals – Issuance Process Overview

Permit Fees



- \$ A description of required fees can be found in 326 IAC 2-1.1-7.
- \$ Applicants are not required to submit the filing fee with submission of the application—filing fee will be included in the bill for the permitting fees.
- \$ Bills for permitting fees are sent out during the public notice period or at issuance if there is no public notice period.
- \$ After a source begins operation, they may be subject to annual operating permit fees.





Air Permitting Approvals – Issuance Process Overview

When Can I Construct?

- Not until the construction approval has been issued!



Remember slide 18

- 326 IAC 1-2-21 "Construction" defined:
 - Means fabrication, erection, or installation of an emission unit.
 - Does not include: installation of building support, erection of storage structure, dismantling of equipment and control devices, etc.
- 326 IAC 2-2-1 "Construction" defined
 - Any physical change or change in the method of operation.



Air Permitting Approvals – Issuance Process Overview

[Air Quality Permit Status Search](#)

- All permit documents are available online to the public.
- Applicants can:
 - See who is assigned to review the application.
 - Track the status of the application.
 - Review draft and issued versions of the permit.

The screenshot shows the IN.gov website header with the IDEM logo. The page title is "Air Quality Permit Status Search". Below the title is a description: "Check the status of your permit filing with the Indiana Department of Environmental Management, Office of Air Quality." There are four navigation links: "IDEM Home", "Frequently Asked Questions", "Permit Wizard", and "Contact OAQ". The main content area has a section titled "Search for permit status" with the text "This service provides options for searching by:" followed by a bulleted list: "partial source name and county", "permit type, county, milestone, and time frame", "permit numbers, or", and "SIC numbers." Below the list is a "Search »" button. To the right of the search section are three links: "Tell a Friend about this service", "About IDEM Air Permits", and "Air Permits Application Information". The footer of the page reads "« IDEM Web site | Air Quality Home".



Air Permitting Approvals – Issuance Process Overview

Application Time Clock

- Most applications must be processed within a statutory required time frame.
- Required time frames are listed in 326 IAC 2-1.1-8.
- If a permit is not issued on time, the applicant may request a refund of their permitting fee upon issuance of the permit.





Air Permitting Approvals – Issuance Process Overview

Petitioning for Administrative Review

- All petitions for Administrative Review of OAQ permit decisions must be filed with the Office of Environmental Adjudication.
- The Notice of Decision that accompanies each permit decision sets out the requirements for filing the Petition for Administrative Review and the deadline.
- Most petitions must be filed within 15 days. Petitions regarding first Title V permit decisions have a 30-day deadline.





Air Permitting Approvals – Issuance Process Overview

Permit Expiration



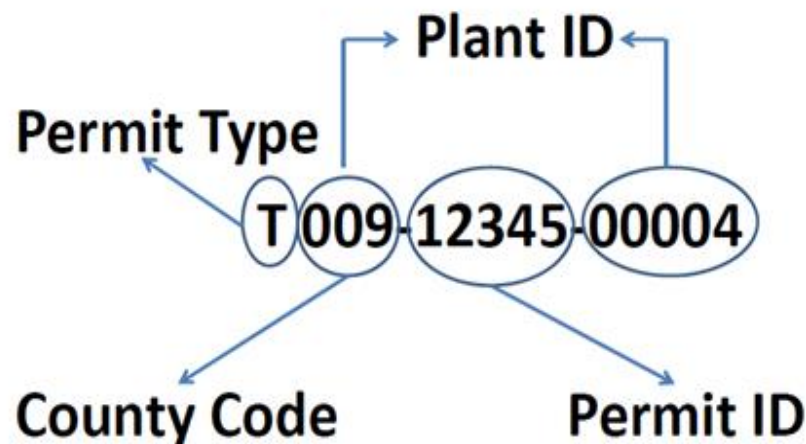
- Initial permits of all levels expire five years after the original issuance date. (Registrations and SSOAs do not expire.)
- MSOP and FESOP sources have 10 year time frames for all subsequent renewal permits.
- Permit revisions, modifications, and amendments do not affect the expiration date.
- A timely renewal application must be submitted for the source to operate legally after the permit expires (in B Section of permit).
- “Timely” means:
 - Title V and FESOP – nine months prior to the expiration date.
 - MSOP – 120 days prior to the expiration date.





Air Permitting Approvals – Permit Number

- Permit Numbering – Each permit is assigned a letter and a number sequence that identifies the permit level or type, the plant ID number, and the permit ID.
- The plant ID is made up of a county code (based on source location) and a source specific ID number (e.g., 009-00004).





Air Permitting Approvals – Permit Structure

- Each permit contains terms and conditions that describe the construction and/or operating requirements for a source.
- All permits issued by the OAQ follow a basic structure for the content:
 - ☐ Section A – Source Summary
 - ☐ Section B – General Conditions
 - ☐ Section C – Source Operation Conditions
 - ☐ Section D – Emission Unit Operation Conditions
 - ☐ Section E – Federal Requirements



Air Permitting Approvals – Permit Structure

☐ Section A – Source Summary

- General Source Information
- Type of facility
- SIC
- County
- Attainment Status
- Source Status – PSD, Title V, Section 112
- Equipment List (all significant and insignificant activities)

☐ Section B – General Conditions

- | | |
|--|-------------------------------------|
| • Definitions | • Emergency provisions |
| • Permit terms | • Malfunctions |
| • Certification requirements | • Permit modifications or revisions |
| • Annual notification requirements | • Annual fee payment information |
| • Preventive Maintenance Plan (PMP) provisions | • Declaration of credible evidence |



Air Permitting Approvals – Permit Structure



Section C – Source Operation Conditions

- Opacity limitations
- Open burning and incineration terms
- Fugitive dust restrictions
- Asbestos regulations
- Performance testing and retesting guidelines
- Compliance monitoring requirements
- Required responses to excursions or exceedances
- General emission statement
- Record keeping and reporting requirements



Air Permitting Approvals – Permit Structure

☐ Section D – Emission Unit Operation Conditions

- Emission Limitations and Standards
 - Emission Limits (State rules)
 - PMP Requirement
- Compliance Determination Requirements
 - Control Device Requirements
 - Testing Requirements
- Compliance Monitoring Requirements
 - Device Inspections
 - Daily, Weekly, Quarterly Monitoring
- Record Keeping Requirements
- Reporting Requirements



Air Permitting Approvals – Permit Structure

- ❑ Section E – Federal Rules
 - New Source Performance Standards (NSPS) Emission Limits
 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)
 - If no federal rules apply to a source, no E section will be included in the permit.
 - If multiple federal rules apply to facilities at a source, multiple E sections will be included in the permit.
 - The E section of the permit outlines what emission units or processes are subject to the rule, and references the specific federal rule citations that apply.
 - The rule in its entirety is then attached as an appendix to the permit.



Air Permitting Approvals

Top 10 Permitting Tips

- Alternate Operational Scenarios – Create flexible emission limitations in the permit so revisions are not required every time something changes.
- Limitations – Set limits so that future revisions can be minor.
- Maximize Revision Openings – Make as many changes as possible at one time for the revision level.
- Streamlined Renewals – Take advantage of smaller application requirements.
- Review – Always REVIEW, REVIEW, REVIEW the permit terms (applicant review, PN, post issuance).
- Pay Attention – Special focus on A and D Sections.





Air Permitting Approvals

Top 10 Permitting Tips

- Reporting Frequency – Has it changed based on modifications?
- Emission Factors – Are new ones available? Current testing results change your calculations?
- Revisions – Anytime the permit is open, IDEM, OAQ can make changes unrelated to your request. Are there new requirements you were not expecting? How will you comply?
- Pre-application Meetings – Take advantage of the ability to meet with OAQ staff and ask questions, confirm correct applicability with current regulations, negotiate permit terms, discuss complex projects before an application is submitted.





Air Permitting Approvals – Exemptions

New sources qualify as exempt from the registration and air permit provisions if all of the following statements are true:

- (1) The sourcewide total PTE for all regulated pollutants is less than the exemption thresholds.
- (2) The source is not subject to a NSPS or NESHAP that specifically requires the source to apply for a Part 70 operating permit.
- (3) The source does not perform decorative chrome plating using a trivalent chromium process and wetting agent.
- (4) The source is not subject to 326 IAC 20-8 (Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks).
- (5) The source has the potential to emit before control less than one ton per year of lead or lead compounds measured as elemental lead and operates one of the following types of facilities:
 - A primary lead smelter, a secondary lead smelter, a primary copper smelter, a lead gasoline additive plant, or a lead-acid storage battery manufacturing plant that produces 2,000 or more batteries per day.



Air Permitting Approvals – Exemptions

Threshold Emissions Levels For Exemptions	
Particulate Matter	< 5 tpy
PM10	< 5 tpy
PM2.5	< 5 tpy
SO2	< 10 tpy
NOx	< 10 tpy
VOCs	<10 tpy for sources not required to use air pollution control equipment to comply with the applicable provisions of 326 IAC 8
	<5 tpy for sources required to use air pollution control equipment to comply with the applicable provisions of 326 IAC 8
CO	< 25 tpy
Lead	< 0.2 tpy
HAPs	< 10 tpy for each single HAP
	< 25 tpy for any combination of HAPs
Hydrogen Sulfide (H2S)	< 5 tpy
Total reduced sulfur (TRS)	< 5 tpy
Reduced sulfur compounds	< 5 tpy
Fluorides	< 5 tpy



Air Permitting Approvals – Exemptions

A stationary source meeting the criteria for an exemption under 326 IAC 2-1.1-3 is not required to submit an application to obtain a registration or permit. However, the stationary source may voluntarily apply for a Letter of Exemption from IDEM.

– Letter of Exemption

- Companies can elect to apply for a letter of exemption if they are below permitting thresholds.
- If the source adds additional equipment, then they will need to re-evaluate if a permit is required for their activity.

Air Permitting Approvals – Exemptions

Applicability of rules to exempt sources:

- A common misconception is that sources or emission units that meet the criteria for an exemption are exempt from all state and federal regulations.
- 326 IAC 2-1.1-3 only exempts sources and emission units from the registration and permitting requirements of Article 2.





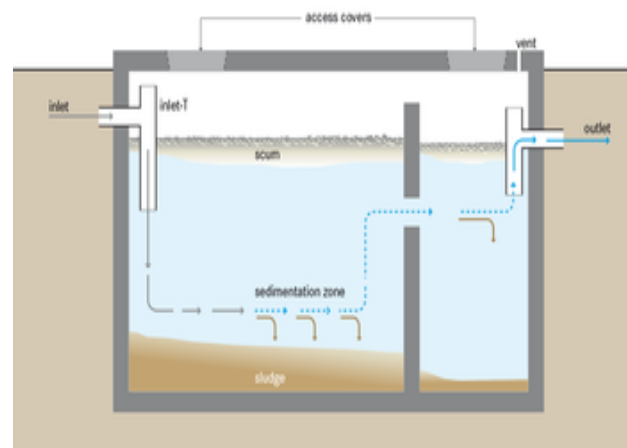
Air Permitting Approvals – Exemptions

If a source or emission unit meets the applicability criteria for any state or federal emission limitation, work practice standard or other requirement, they are subject to that requirement even if they also meet the definition of an exempt source or emission unit under 326 IAC 2-1.1-3.

Example - A source has a small cold cleaner degreaser that uses less than 145 gallons of non-halogenated solvent per year. This source is required to comply with the applicable work practice and control standards in 326 IAC 8-3 (Organic Solvent Degreasing Operations) for this unit.



There are rules.





Air Permitting Approvals – Registration

New sources qualify as for a Registration if one of the following statements is true:

- (1) The potential to emit before controls of at least one of the pollutants listed is within the range for Registrations.
- (2) The source is subject to 326 IAC 20-8 (Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks); and consists only of decorative chromium electroplating using only a trivalent chromium process that incorporates a wetting agent.

and all of the following statements are true:

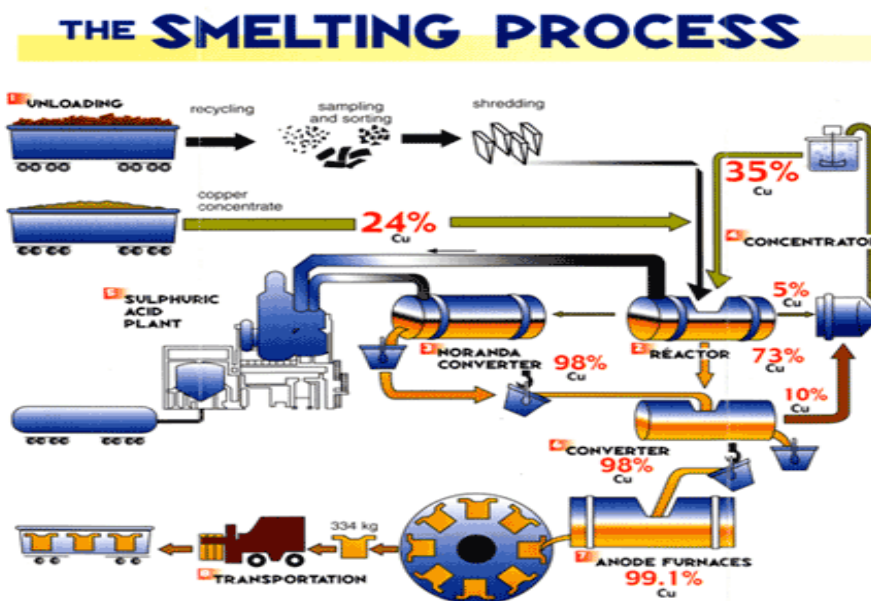
- (1) The sourcewide total PTE for HAPs is less than 10 tons per year of a single HAP and less than 25 tons per year of total combined HAPs (not a major source of HAPs).
- (2) The source is not subject to a NSPS or NESHAP that specifically requires the source to apply for a Part 70 operating permit.
- (3) The source does not perform hard chrome plating.

Air Permitting Approvals – Registration

And all of the following statements are true (cont.):

- (4) The source has the potential to emit before control less than one ton per year of lead or lead compounds measured as elemental lead and operates one of the following types of facilities:

A primary lead smelter, a secondary lead smelter, a primary copper smelter, a lead gasoline additive plant, or a lead-acid storage battery manufacturing plant that produces 2,000 or more batteries per day.





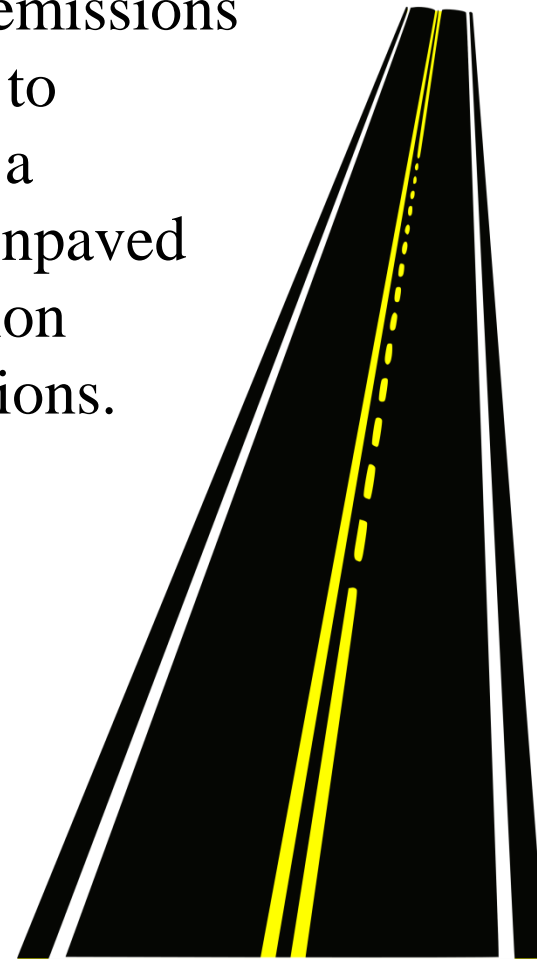
Air Permitting Approvals – Registration

Threshold Emissions Levels For Registrations	
Particulate Matter	≥ 5 tpy and < 25 tpy
PM ₁₀	≥ 5 tpy and < 25 tpy
PM _{2.5}	≥ 5 tpy and < 25 tpy
SO ₂	≥ 10 tpy and < 25 tpy
NO _x	≥ 10 tpy and < 25 tpy
VOCs	≥ 10 tpy and < 25 tpy for sources not required to have a control device to comply with applicable provisions of 326 IAC 8 ≥ 5 tpy and < 25 tpy for sources that require a control device to comply with applicable provisions of 326 IAC 8
CO	≥ 25 tpy and < 100 tpy
Lead	≥ 0.2 tpy and < 5 tpy
HAPs	< 10 tpy for each single HAP < 25 tpy for any combination of HAPs
Hydrogen Sulfide (H ₂ S)	≥ 5 tpy and < 25 tpy
Total reduced sulfur (TRS)	≥ 5 tpy and < 25 tpy
Reduced sulfur compounds	≥ 5 tpy and < 25 tpy
Fluorides	≥ 5 tpy and < 25 tpy
For sources consisting of only decorative chromium electroplating tanks that use a trivalent chromium process that incorporates a wetting agent and are subject to 326 IAC 20-8, there is no emissions threshold.	



Air Permitting Approvals – Registration

- For Registrations, the PTE includes fugitive emissions as well as point source emissions. Therefore, to determine whether a source should be issued a Registration, the emissions from paved and unpaved roads, storage piles, and other fugitive emission sources must be included in the PTE calculations.





Air Permitting Approvals – Registration

- The Registration includes approval to both construct and operate the source and does not require a public notice period prior to issuance.
- Registrations do not need to be renewed
 - However, any changes made to the source, such as installing a new emission unit or modifying an existing emission unit, will require the source to submit an application either to revise the current Registration or apply for a different approval if the source no longer meets the criteria previously listed.
- Registration Modification
 - Administrative amendment is required within 30 days of a modification in 326 IAC 2-5.5-6(d).
 - Modifications not described in 326 IAC 2-5.5-6(d) must be submitted for approval prior to implementation.





Air Permitting Approvals – MSOP

New sources qualify for an MSOP if one of the following statements is true:

- (1) The potential to emit before controls of at least one of the pollutants listed is within the range for MSOPs.
- (2) The source consists of a chromium electroplating, chromium anodizing tank or an operation subject to 326 IAC 20-8 (Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks). [Note: Sources that consist only of decorative chromium electroplating using only a trivalent chromium process that incorporates a wetting agent are excluded].
- (3) The source has the potential to emit before controls of equal to or greater than one ton per year of lead or lead compounds measured as elemental lead and operates one of the following types of facilities:

A primary lead smelter, a secondary lead smelter, a primary copper smelter, a lead gasoline additive plant, or a lead-acid storage battery manufacturing plant that produces 2,000 or more batteries per day.

and

The source is not subject to a NSPS or NESHAP that specifically requires the source to apply for a Part 70 operating permit.



Air Permitting Approvals – MSOP

Threshold Emissions Levels For MSOPs	
Particulate Matter	≥ 25 tpy and no upper limit (<250 PSD Minor)
PM10	≥ 25 tpy and < 100 tpy
PM2.5	≥ 25 tpy and < 100 tpy
SO2	≥ 25 tpy and < 100 tpy
NOx	≥ 25 tpy and < 100 tpy
VOCs	≥ 25 tpy and < 100 tpy
CO	< 100 tpy
Lead	≥ 5 tpy and < 10 tpy
HAPs	< 10 tpy of a single HAP < 25 tpy of a combination of HAPs
Hydrogen Sulfide (H2S)	≥ 25 tpy and < 100 tpy
Total reduced sulfur (TRS)	≥ 25 tpy and < 100 tpy
Reduced sulfur compounds	≥ 25 tpy and < 100 tpy
Fluorides	≥ 25 tpy and < 100 tpy



Air Permitting Approvals – MSOP

- For MSOPs, the PTE includes fugitive emissions as well as point source emissions. Therefore, to determine whether a source should be issued an MSOP, the emissions from paved and unpaved roads, storage piles, and other fugitive emission sources must be included in the PTE calculations.





Air Permitting Approvals – MSOP

- 120-day review upon receipt of completed application.
- Requires a 30-day public notice prior to issuance – no review by U.S. EPA.
- A new MSOP is valid for five years.
- MSOP renewal is valid for 10 years.
- A MSOP issued to a new source will include approval to both construct and operate the source.
- Any changes made to the source, such as installing a new emission unit or modifying an existing emission unit, will require the source to submit an application for either an administrative amendment or a permit revision.



Air Permitting Approvals – MSOP Revisions

- There are four types of permit modifications available to MSOP-permitted operations under Indiana air permitting rules.

Summary of Types of Modifications and Rule Citations for MSOPs:	
Permit Type	Citation
Emergency Repair or Replacement	326 IAC 2-6.1-6(b)
MSOP Administrative Amendment	326 IAC 2-6.1-6(d)
MSOP Minor Permit Revision	326 IAC 2-6.1-6(g)
MSOP Significant Permit Revision	326 IAC 2-6.1-6(i)



Air Permitting Approvals – MSOP Revisions



Emergency Repair or Replacement



- Does not result in an increase in the potential to emit for any regulated pollutant from any emissions unit or equipment that was repaired or replaced.
- Does not constitute a major modification under PSD (326 IAC 2-2), nonattainment Emission Offset regulations (326 IAC 2-3), or under the case-specific Maximum Achievable Control Technology (MACT) standards (326 IAC 2-4.1).
- Either returns the emissions unit, process, or control equipment to normal operations after an upset, malfunction, or mechanical failure or prevents impending and imminent failure of the emissions unit, process, or control equipment.

A source must obtain IDEM approval within 30 days of initiating repair or replacement.



Air Permitting Approvals – MSOP Revisions

- Administrative Amendment
 - Can include some physical changes.
 - Notice must be provided to IDEM within 30 days for Modifications per 326 IAC 2-6.1-6(b)(3).
 - A source can elect to notify of changes for exempt insignificant activities.

Pollutant	MSOP Administrative Amendment (tpy)*
Particulate Matter (PM)	< 5
PM10/PM2.5	< 5
Sulfur Dioxide (SO ₂)	< 10
Nitrogen Oxides (NO _x)	< 10
Volatile Organic Compounds (VOC)	< 10 for sources <u>not</u> required to use control equipment to comply with applicable provisions of 326 IAC 8
	< 5 for sources required to use control equipment to comply with applicable provisions of 326 IAC 8
Carbon Monoxide (CO)	< 25
Lead (Pb)	< 0.2
Hazardous Air Pollutants (HAP)	< 1 of a single HAP or ≤ 2.5 of any combination of HAP



Air Permitting Approvals – MSOP Revisions

- MSOP Minor Permit Revisions
 - Must be submitted for approval prior to implementation. Examples include:
 - Reduction in monitoring or reporting frequency.
 - Addition of a portable source.
 - Some pollution control or prevention projects.
 - An emission limit to avoid Best Available Control Technology (BACT).
 - Modifications (addition of small emission units or changes to existing units or methods of operation of existing units) with a PTE within the ranges provided.



Air Permitting Approvals – MSOP Revisions - MPR

Thresholds for MSOP Minor Permit Revisions	
Particulate Matter	≥ 5 tpy and < 25 tpy
PM10/PM2.5	≥ 5 tpy and < 25 tpy
SO2	≥ 10 tpy and < 25 tpy
NOx	≥ 10 tpy and < 25 tpy
VOCs	≥ 10 tpy and < 25 tpy for sources not required to have a control device ≥ 5 tpy and < 25 tpy for sources that require a control device to comply with provisions of 326 IAC 8
CO	≥ 25 tpy and < 100 tpy
Lead	≥ 0.2 tpy and < 5 tpy
HAPs	< 10 tpy of a single HAP < 25 tpy of a combination of HAPs
Hydrogen Sulfide (H2S)	≥ 5 tpy and < 25 tpy
Total reduced sulfur (TRS)	≥ 5 tpy and < 25 tpy
Reduced sulfur compounds	≥ 5 tpy and < 25 tpy
Fluorides	≥ 5 tpy and < 25 tpy



Air Permitting Approvals – MSOP Revisions

- MSOP Significant Permit Revisions
 - Must be submitted for approval prior to implementation and requires a public notice.
 - Modifications subject to 326 IAC 8-1-6 (BACT) - VOC reduction requirements for new facilities.
 - Modifications reducing or removing compliance monitoring, testing, record keeping, or reporting, unless it was a result of a change under 326 IAC 2-6.1-6(d)(5) (change in applicability).
 - Modifications with the potential to emit greater than or equal to the thresholds provided in the following table (Thresholds for MSOP Significant Permit Revisions).



Air Permitting Approvals – MSOP Revisions - SPR

Thresholds for MSOP Significant Permit Revisions	
Particulate Matter	> 25 tpy
PM10/PM2.5	> 25 tpy
SO ₂	> 25 tpy
NO _x	> 25 tpy
VOCs	> 25 tpy
CO	> 100 tpy
Lead	> 0.6 tpy (for a source with an existing PTE ≥ 5 tpy) ≥ 1 tpy (for a source with an existing PTE < 5 tpy)
Hydrogen Sulfide	> 25 tpy
Total Reduced Sulfur	> 25 tpy
Reduced Sulfur Compounds	> 25 tpy
Fluorides	> 25 tpy
HAPs	> 10 tpy for a single HAP > 25 tpy for a combination of HAPs



Air Permitting Approvals – Title V

New sources qualify for a Title V if one of the following statements is true:

- (1) The potential to emit before controls of at least one of the pollutants is above the threshold for Title V Sources.
- (2) The source is subject to a NESHAP or NSPS that specifically requires the source to apply for a Part 70 operating permit.

The pollutants that are regulated as part of the Title V program are essentially the same as the pollutants regulated under every other permit program, except only PM10 and PM2.5 are regulated, not particulate matter (PM). Exceeding the threshold for a single pollutant causes the source to obtain a Title V permit.



Air Permitting Approvals – Title V

Threshold Emissions Levels For Title V/Part 70	
PM	NA
PM10/PM2.5	≥ 100 tpy
SO ₂	≥ 100tpy
NO _x	≥ 100 tpy
VOCs*	≥ 100 tpy
CO	≥ 100 tpy
Lead	≥ 100 tpy (≥ 10 tpy for lead smelters)
HAPs	≥ 10 tpy of a single HAP ≥ 25 tpy of a combination of HAPs

- Fugitive emissions don't count unless the source belongs to one of the source categories listed in 326 IAC 2-7-1(22)(B) – (Particulate and VOC only).
- The fugitive emissions of HAPS are included in the PTE for the purpose of determining Part 70 applicability irrespective of source category.



Air Permitting Approvals – Title V

The source categories listed in 326 IAC 2-7-1(22)(B)

- | | |
|--|---|
| (1) Fossil fuel-fired steam electric plants of more than 250 million Btu/hr heat input | (15) Phosphate rock processing plants |
| (2) Coal cleaning plants (with thermal dryers) | (16) Coke oven batteries |
| (3) Kraft pulp mills | (17) Sulfur recovery plants |
| (4) Portland cement plants | (18) Carbon black plants (furnace plants) |
| (5) Primary zinc smelters | (19) Primary lead smelters |
| (6) Iron and steel mill plants | (20) Fuel conversion plants |
| (7) Primary aluminum ore reduction plants | (21) Sintering plants |
| (8) Primary copper smelters | (22) Secondary metal production plants |
| (9) Municipal incinerators capable of charging more than 250 tons of refuse per day | (23) Chemical process plants |
| (10) Hydrofluoric acid plants | (24) Fossil fuel boilers (or combinations thereof) totaling more than 250 million Btu/hr heat input |
| (11) Sulfuric acid plants | (25) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels |
| (12) Nitric acid plants | (26) Taconite ore processing plants |
| (13) Petroleum refineries | (27) Glass fiber processing plants |
| (14) Lime plants | (28) Charcoal production plants |



Air Permitting Approvals – Title V

- Completed application reviewed by IDEM for up to 270 days.
- Subject to public notice.

- Subject to U.S. EPA review

-Typically, Region 5 has 45 days to review a Part 70 permit.

-If they complete their review before the 45 days have elapsed, Region 5 notifies IDEM and the Title V permit can be issued without further delay, unless there are U.S. EPA comments.



- Must be renewed every five years (even if no changes).



Air Permitting Approvals – Title V Modifications



Summary of Types of Modifications and Rule Citations for Title V Operating Permits:

Construction / Operation	Modification Type	Rule Citation
Upon submission of application - no IDEM approval required to construct	Emergency Repair or Replacement	326 IAC 2-7-10.5(c)
Upon submission of application- no IDEM approval required to construct	TV Administrative Amendment	326 IAC 2-7-11(a)
Requires Approval to construct	TV Minor Source Modification	326 IAC 2-7-10.5(e)
Requires Approval to construct	TV Significant Source Modification	326 IAC 2-7-10.5(g)
Requires Approval to operate	TV Minor Permit Modification	326 IAC 2-7-12(b)
Requires Approval to operate	TV Significant Permit Modification	326 IAC 2-7-12(d)



Air Permitting Approvals – Title V Modifications



Emergency Repair or Replacement



- Does not result in an increase in the potential to emit for any regulated pollutant from any emissions unit or equipment that was repaired or replaced.
- Does not constitute a major modification under PSD (326 IAC 2-2), nonattainment Emission Offset regulations (326 IAC 2-3), or under the case-specific Maximum Achievable Control Technology (MACT) standards (326 IAC 2-4.1).
- Either returns the emissions unit, process, or control equipment to normal operations after an upset, malfunction, or mechanical failure or prevents impending and imminent failure of the emissions unit, process, or control equipment.

A source must obtain IDEM approval within 30 days of initiating repair or replacement.



Air Permitting Approvals – Title V Modifications

- Administrative Amendments per 326 IAC 2-7-11
 - Revisions to a permit that do not affect the emissions or compliance conditions.
 - Examples include:
 - » Transfer of ownership
 - » Change in a source name
 - » Changes in “Insignificant Activities” or “Exempt” units
 - Source can implement the change immediately upon submitting the application.



Air Permitting Approvals – Title V Modifications - MSM

Thresholds for Title V Minor Source Modifications

Particulate Matter	≥ 5 tpy and < 25 tpy
PM10/PM2.5	≥ 5 tpy and < 25 tpy
SO2	≥ 10 tpy and < 25 tpy
NOx	≥ 10 tpy and < 25 tpy
VOCs	≥ 10 tpy and < 25 tpy for sources not required to have a control device ≥ 5 tpy and < 25 tpy for sources required to have a control device in accordance with 326 IAC 8
CO	≥ 25 tpy and < 100 tpy
Lead	≥ 0.2 tpy and < 1 tpy
HAPs	< 10 tpy of a single HAP < 25 tpy of a combination of HAPs Note: there is no specific provision under MSM that addresses HAPs
Hydrogen Sulfide (H2S)	≥ 5 tpy and < 25 tpy
Total reduced sulfur (TRS)	≥ 5 tpy and < 25 tpy
Reduced sulfur compounds	≥ 5 tpy and < 25 tpy
Fluorides	≥ 5 tpy and < 25 tpy
*Sources in Lake or Porter County w/ VOC or NOx PTE ≥ 25 tpy (326 IAC 2-7-10.5(e)(2))	Increase ≥ 15 pounds/day of VOCs Increase ≥ 25 pounds/day of NOx



Air Permitting Approvals – Title V Modifications

- Minor Source Modifications (MSM)
 - Reviewed in accordance with 326 IAC 2-7-10.5(e) and (f).
 - IDEM must approve the MSM prior to any implementation, construction, or operation of the changes proposed by the source in the MSM application.
 - MSM provides construction approval only and must be accompanied by an AA or Permit Modification for operational approval.
 - Construction approval through a MSM will be issued by IDEM within 45 days of receipt of a complete application.
 - No requirement for public or U.S. EPA review prior to issuance.



Air Permitting Approvals – Title V Modifications - SSM

Thresholds for Title V Significant Source Modifications

PM, PM10, PM2.5	> 25 tpy
SO ₂	> 25 tpy
NO _x	> 25 tpy
VOCs	> 25 tpy
CO	> 100 tpy
Lead	> 1 tpy
Lead (For a source with an existing PTE \geq 5 tpy)	> 0.6 tpy
Hydrogen Sulfide	> 25 tpy
Total Reduced Sulfur	> 25 tpy
Reduced Sulfur Compounds	> 25 tpy
Fluorides	> 25 tpy
HAPs	> 10 tpy for a single HAP > 25 tpy for a combination of HAPs



Air Permitting Approvals – Title V Modifications

- Significant Source Modifications (SSM)
 - Reviewed in accordance with 326 IAC 2-7-10.5(g).
 - IDEM must approve a SSM prior to any implementation, construction, or operation of the changes proposed by the source in the SSM application.
 - SSMs provides construction approval only and must be accompanied by an AA or Permit Modification for operational approval.
 - Construction approval through a SSM will be issued by IDEM within
 - 120 days (minor PSD or EO)
 - 270 days (major PSD or EO)
 - Does require public notice.



Air Permitting Approvals – Title V Modifications - MPM

Title V Minor Permit Modifications	
Type of Change	Rule Citation
Do not violate any applicable requirement.	326 IAC 2-7-12(b)(1)(A)
Do not involve significant changes to existing monitoring, reporting, or record keeping requirements in the Part 70 permit.	326 IAC 2-7-12(b)(1)(B)
Do not require or change a: (i) case-by-case determination of an emission limitation or other standard; (ii) source specific determination for temporary sources of ambient impacts; or (iii) visibility or increment analysis.	326 IAC 2-7-12(b)(1)(C)
Do not seek to establish or change a Part 70 permit term/condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. The terms and conditions include the following: (i) A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA. (ii) An alternative emissions limit approved under regulations promulgated under Section 112(i)(5) of the CAA.	26 IAC 2-7-12(b)(1)(D)
Are not modifications under any provision of Title I of the CAA.	326 IAC 2-7-12(b)(1)(E)
Are not required by the Part 70 program to be processed as a significant modification.	326 IAC 2-7-12(b)(1)(F)
Minor Part 70 permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that the minor Part 70 permit modification procedures are explicitly provided for in the applicable implementation plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA	326 IAC 2-7-12(b)(2)



Air Permitting Approvals – Title V Modifications

- Minor Permit Modifications
 - Requires public notice and U.S. EPA review.
 - Source can implement the change immediately upon submitting the application.
 - *If IDEM determines that the application is not approved as implemented or requires a different permitting level, the permit applicant may be subject to fines and/or other enforcement actions for implementing the modification without proper approval.*



Air Permitting Approvals – Title V Modifications

- Significant Permit Modifications
 - A modification that does not qualify as an AA or MPM.
 - A modification that would reduce compliance terms included in the permit. (Every significant change in existing monitoring Part 70 permit terms or conditions and every relaxation of reporting or record keeping permit terms or conditions shall be considered significant.)
 - Title 1 modifications (modifications under NSPS, NESHAP, PSD, or Emission Offset).



Air Permitting Approvals – Title V Modifications

- Significant Permit Modifications

- The addition of an alternative operating scenario.

Examples include:

- ☐ Use of an alternative fuel.
 - ☐ Use of a different raw material, resulting in a different final product.
 - ☐ Use of a different method of compliance.
 - The addition, renewal, termination, revocation and revision of Plant-wide Applicability Limitation (PAL) provisions in accordance with 326 IAC 2-2.4 or 326 IAC 2-3.4 shall be considered significant.





Air Permitting Approvals – Title V Modifications

Summary of Title V Permit Modification Types and Approval Status	
Permit Modification Level	When Approval is Granted
AA	The source may implement the changes addressed in the AA immediately upon submission of the application.
MSM	The MSM authorizes the construction/modification of the emission unit(s) when the MSM is issued.
SSM	<p>The SSM authorizes the construction/modification of the emission unit(s) when the SSM is issued.</p> <p>Each modification approval issued under SSM shall provide that construction must commence within 18 months of the issuance of the SSM.</p>
MPM	The source may implement the changes proposed in the MPM immediately upon submission of the application.
SPM	The SPM authorizes the operation of the new emission unit(s) and other changes to the permit, when the SPM is issued.



Air Permitting Approvals

Alternatives to Title V





Air Permitting Approvals – FESOP

A Federally Enforceable State Operating Permit (FESOP) is an optional permit that is available to a source otherwise required to obtain a Title V permit (based on PTE).

The only exceptions are those sources that are specifically required to operate under a Title V permit by provisions in a NESHAP or NSPS.



- Source elects to have restrictions for operations to avoid a Title V permit thresholds and/or NESHAP requirements.
- Compliance requirements are similar to a Title V permit.



Air Permitting Approvals – FESOP

What are some advantages of a FESOP for the source?



- Unlike the Title V permitted sources, FESOP sources do not have to pay fees for the amount of pollutants emitted annually.
- Sources operating under a FESOP are permitted to emit more pollutants than those operating under the Permit by Rule program (another alternative to Title V).
- No 45-day review by the U.S. EPA is required prior to issuance if the FESOP is minor for PSD and Emission Offset.
- Renewals are valid for 10 years.



Air Permitting Approvals – FESOP

FESOP sources located in attainment areas must limit emissions from their entire source to less than Title V thresholds.

Pollutant	Emission Limit (tpy)
PM10/PM2.5	< 100
SO ₂	< 100
NO _x	< 100
VOC	< 100
CO	< 100
Hydrogen Sulfide	< 100
Total Reduced Sulfur	< 100
Reduced Sulfur Compounds	< 100
Fluorides	< 100
Single HAP	< 10
Total HAP	< 25



Air Permitting Approvals – FESOP

FESOP sources located in nonattainment areas that are designated as serious, severe, or extreme nonattainment must limit emissions of PM₁₀/PM_{2.5}, VOC, NO_x, and CO from their entire source to less than the following thresholds:

Pollutant(s)	Nonattainment Area Designation	FESOP Threshold (tons per year)
PM ₁₀ /PM _{2.5}	Serious	< 70
VOC Only (for Lake and Porter counties) VOC and NO _x (for all others)	Serious	< 50
	Severe	< 25
	Extreme	< 10
CO	Serious	< 50



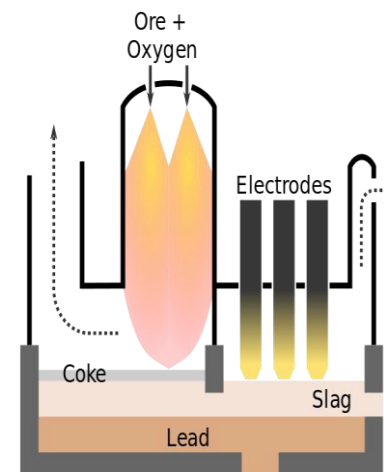
Air Permitting Approvals – FESOP

Fugitives – Do they count toward PTE?



Similar to Part 70 permits, fugitive emissions of HAPs are always counted toward the source PTE, while the fugitive particulate and VOC emissions are only counted for sources belonging to one of the source categories listed in 326 IAC 2-7-1(22)(B).

Therefore, for sources belonging to one of these source categories (1 of 28), the sum of the point source and fugitive particulate, VOC, and HAP emissions must be limited to less than the Part 70 permit thresholds.



Air Permitting Approvals – FESOP

Fugitives – Do they count toward PTE?



- Fugitive emissions of particulate and VOC do not need to be considered for any other source category.

- However, estimates of the fugitive emissions may be required to determine the applicability of other rules (e.g., 326 IAC 6-5 [Fugitive Particulate Matter Emission Limitations]).



Air Permitting Approvals – FESOP

Do emissions from insignificant activities count for PTE and limitations?

In general, emissions from “insignificant” activities, per the definition of an insignificant activity in 326 IAC 2-7-1(21), are counted toward the source PTE and must be taken into account when determining whether a source can comply with their FESOP (included in limits).



Small boilers, fuel dispensing, woodworking shops, and degreasing operations are a few examples of listed insignificant activities.





Air Permitting Approvals – FESOP

Do emissions from insignificant activities count for PTE and limitations?

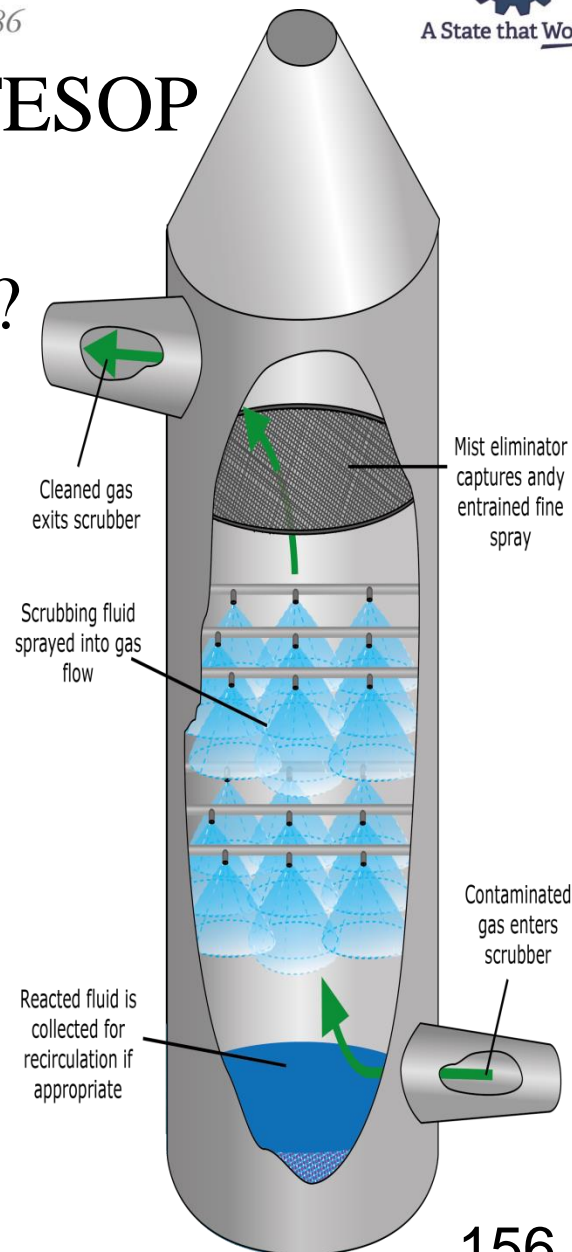
For insignificant activities that generate only fugitive emissions of VOC or particulate matter, such as paved/unpaved roads, the fugitive emissions count only if the source is one of the categories of sources identified in 326 IAC 2-7-1(22)(B).



Air Permitting Approvals – FESOP

Can sources use a control device to comply with the emission limitations?

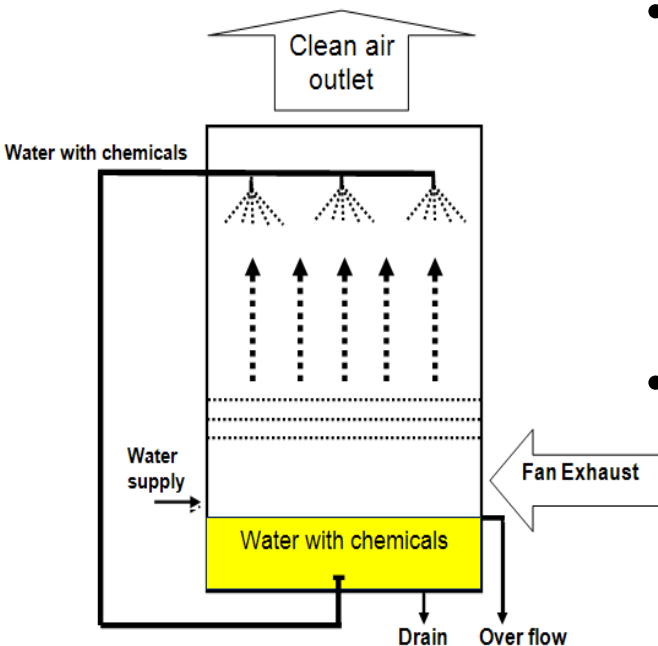
Yes! A source may use a control device to keep their actual emissions of a pollutant to less than the Part 70 permit thresholds.



Air Permitting Approvals – FESOP

Can sources use a control device to comply with the emission limitations?

- YES! However, an emission limit must be included in the permit in order to make the level of control enforceable.
- IDEM may require the source to demonstrate compliance with their FESOP by conducting periodic (typically once every five years) performance tests.





Air Permitting Approvals – FESOP

What types of limits are included in a FESOP?

- All FESOPs contain the following standard condition...

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
 - (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.



Air Permitting Approvals – FESOP

What types of limits are included in a FESOP?

- In addition to the general condition, FESOP limitations applicable to specific emission units or groups of emission units must be included in the D sections of the permit.

These limits may include:

- Limits on the amount of fuel combusted.
- Limits on the amount of material processed.
- Limits on the amount of material used.
- Limits on the number of operating hours.



Air Permitting Approvals – FESOP

What are the disadvantages of a FESOP for the source?



- ❖ The source may be required to do stack testing, maintain records, and/or submit reports to demonstrate compliance with their FESOP limits.
- ❖ A FESOP must be renewed after five years for the first and 10 years all subsequent (SSOAs, and Permit by Rule approvals do not require renewal; however, all other approvals do).
- ❖ Sources operating under a FESOP are required to pay annual fees (no annual fees are required for sources operating in accordance with an MSOP, Permit by Rule approval, and most SSOAs).



Air Permitting Approvals – FESOP Modifications

Modification of a FESOP is reviewed under 326 IAC 2-8-10 through 326 IAC 2-8-11.1 and is similar to the thresholds and procedures to modify an MSOP (with the exception of the citation authority).

Summary of Types of Modifications and Rule Citations for FESOPs	
Type of Change	FESOP Citation
Permit Changes (Administrative Amendments)	326 IAC 2-8-10(a)(1) through (a)(9)
Physical Changes (Administrative Amendments)	326 IAC 2-8-10(a)(10) through (a)(13)
Physical Changes (Minor Permit Revisions)	326 IAC 2-8-11.1(d)
Physical Changes (Significant Permit Revisions)	326 IAC 2-8-11.1(f)(1)(A) through (f)(1)(H)
Permit Changes (Significant Permit Revisions)	326 IAC 2-8-11.1(f)(1)(H)



Air Permitting Approvals – SSOA

Source Specific Operating Agreements (SSOA)

- Only available to specific industry types (13).
- Reduced fees.
- Pre-established operating terms and conditions (“as is”).
- Require specific levels of air pollution control, strict limitations on the amount of materials used or processed, or a combination of the two.
- Simplified compliance.
- No renewal required.
- A source may apply for up to four SSOAs.

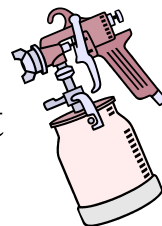




Air Permitting Approvals – SSOA

➤ Sources with activities included in the 13 specific types of operations may choose to operate under the SSOA program.

(1) Industrial or commercial surface coating operations **not** subject to 326 IAC 8-2, graphic arts operations **not** subject to 326 IAC 8-5-5 (326 IAC 2-9-2.5).



(2) Surface coating or graphic arts operation (326 IAC 2-9-3).

(3) Woodworking operations (326 IAC 2-9-4).



(4) Abrasive cleaning operations (326 IAC 2-9-5).

(5) Grain elevators (326 IAC 2-9-6).

(6) Sand and gravel plants (326 IAC 2-9-7).



Air Permitting Approvals – SSOA

- Sources with activities included in the 13 specific types of operations may choose to operate under the SSOA program.



(7) Crushed stone processing plants (326 IAC 2-9-8).

(8) Ready-mix concrete batch plants (326 IAC 2-9-9).

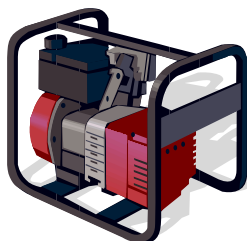
(9) Coal mines and coal preparation plants (326 IAC 2-9-10).

(10) Automobile refinishing operations (326 IAC 2-9-11).

(11) Degreasing operations (326 IAC 2-9-12).

(12) External Combustion Sources (326 IAC 2-9-13).

(13) Internal Combustion Sources (326 IAC 2-9-14).





Air Permitting Approvals – SSOA

- The source will need a SSOA for each type of operation at the source.
- A source may not simultaneously operate under more than one of the **same type** of SSOA or under a SSOA and some other type of operating permit (such as operating under a SSOA and a FESOP).
- Sources can operate under up to four **different** SSOAs, so long as the total potential to emit for any regulated pollutant, as limited by the SSOAs, does not exceed major source levels.
- Some types of SSOAs require the source to have a construction permit
- If no construction permit is required, the source can begin construction and operation of the source once the SSOA approval letter has been issued by IDEM.



Air Permitting Approvals – SSOA

The following SSOAs require the source to have a construction permit

- Woodworking operations (326 IAC 2-9-4(e))
- Grain elevators (326 IAC 2-9-6)
- Sand and gravel plants (326 IAC 2-9-7(b)(2) and (b)(3))
- Crushed stone processing plants (326 IAC 2-9-8 (b)(2) and (b)(3))
- Coal mines and coal preparation plants (326 IAC 2-9-10)
- External Combustion Sources (326 IAC 2-9-13)
- Internal Combustion Sources (326 IAC 2-9-14).

The requirements of the SSOA can be included in the construction permit, but a 30-day public comment period is required for the construction permit.





Air Permitting Approvals – SSOA

What information should be included in a SSOA?

A SSOA should include a letter, which includes:

- The name and location of the source.
- The specific requirements of the SSOA type(s) that are relevant to the source.
- The general requirements that are applicable to all sources operating under the SSOA program.



Air Permitting Approvals – SSOA



Important Responsibilities to Remember:

- Any records required to be kept by a source in accordance with the SSOA shall be maintained at the site for at least five years and shall be made available for inspection by the department upon request.
- Any exceedance of any requirement contained in the SSOA shall be reported, in writing, within one week of its occurrence.
- The SSOA does not relieve the permittee of the responsibility to comply with the provisions of any applicable federal (NSPS/NESHAP), state, or local rules.
- If an applicable NSPS or NESHAP is identified, the specific requirements applicable to the affected emission units should be included in the SSOA.



Air Permitting Approvals – SSOA

What are the advantages of operating under the SSOA program?



- ❖ If the source has a SSOA, then the source is not required to have another type of operating permit (such as a FESOP or Part 70 permit).
- ❖ In some instances, a source can avoid the need for a construction permit because certain SSOAs limit emissions to below 25 tons per year (tpy), which is the construction permit (New Source Construction Permit) threshold.
- ❖ The SSOA does not have to be renewed, so long as the source complies with the operational limits in the agreement.
- ❖ There is no annual fee associated with SSOAs (with the exception of coal mining and stone crushing activities).





Air Permitting Approvals – SSOA

What are the disadvantages of a SSOA for the source?



- ❖ The limits contained in the SSOAs are not flexible. The source must accept the limits as they are written in 326 IAC 2-9.
- ❖ The limits included in the SSOA may be stricter than the limits that would be included in a FESOP for the same source.
- ❖ Sources are restricted to only four different types of SSOAs and cannot have two SSOAs of the same type.





Air Permitting Approvals – SSOA Modifications

- If a source needs to add, remove, or modify the SSOA to comply with a different SSOA, the source will need to apply for and obtain a new SSOA that will supersede the existing SSOA.



- There is no option to modify/revise a SSOA to deviate from the SSOA limitations requirements contained in the SSOA rules.
- Administrative Amendments are possible to add insignificant activities not covered by the SSOA or to make other administrative changes to the SSOA.
- If a source can no longer comply with the SSOA, the source will need to apply for and obtain the required permit prior to making changes to the operation to would result in noncompliance with the SSOA.



Air Permitting Approvals – PBR

- If a source's actual emissions are <20 percent of any major source thresholds (Title V) for regulated air pollutants or HAPs without the use of pollution control devices, they can avoid Title V or minor source operation permitting by complying with a Permit by Rule (PBR).
- The source must demonstrate compliance by maintaining records demonstrating compliance with the PBR requirements.
- There are two distinct Permit by Rule programs, 326 IAC 2-10 (Permit by Rule) and 326 IAC 2-11 (Permit by Rule for Specific Source Categories).
- PBR rules (326 IAC 2-10 and 326 IAC 2-11) do not limit PM. This means that a source that has 250 TPY PTE (or 100 for a listed source) for PM would still need a federally enforceable operating permit limit that limits PM PTE to less than the major source threshold or they would be subject to PSD.



Air Permitting Approvals – PBR

- Permit-by-Rule (PBR) 326 IAC 2-10
 - A source must adhere to operating limits of 20 percent of the threshold for any major source regulated air pollutants.
 - If located within an attainment area, that is actual emissions of:
 - Less than 20 tons per year of regulated pollutants (CO, NO_x, SO₂, VOC, PM₁₀, PM_{2.5}), or any other regulated pollutant;
 - Less than two tons per year of lead or any other single hazardous air pollutant (HAP); and
 - Less than five tons per year of a combination of HAPs.



Air Permitting Approvals – PBR



- Permit-by-Rule (PBR) 326 IAC 2-10
 - If located within a nonattainment area, that is actual emissions of:
 - <20 percent tons of the area-specific threshold
 - Prior to obtaining and operating under a PBR under 326 IAC 2-10, a new source is required to obtain a construction and operating permit (e.g., Title V, FESOP, or MSOP) and operate under the permit for 12 months in order to demonstrate compliance with the less than 20% thresholds (actual emissions).
 - The source can self-limit production, but may not use control devices in order to achieve compliance with the limitations.
 - The source may elect to transition to a PBR after 12 months of compliance under an operating permit.



Air Permitting Approvals – PBR

- Permit-by-Rule (PBR) for Specific Source Categories 326 IAC 2-11
 - Available for specific operations:
 - Select gasoline dispensing
 - Certain grain elevators
 - Specific grain processing
 - Source elects to comply with PBR operating limitations and no permit is applied for or issued.

Note: This portion of the Indiana SIP has not been fully approved by the U. S. EPA, and IDEM's Office of Air Quality recommends applying for and obtaining the appropriate new source construction permit.



Air Permitting Approvals – PBR

What information should be included in a Permit-by-Rule approval?

A Permit-by-Rule approval letter should include:

- The name and location of the source,
- A source description, and
- The general requirements that are applicable to all sources operating under 326 IAC 2-10 or 326 IAC 2-11.



Air Permitting Approvals – PBR

What are the advantages of operating under the Permit-by-Rule programs?

- The source is not required to have any other type of operating permit (such as a FESOP or Part 70 permit).
- The Permit-by-Rule does not have to be renewed, so long as the source complies with the limits.
- The Permit-by-Rule programs result in lower permitting costs and no approval times for changes at sources because a construction permit is not required for new or existing units as long as the source can continue to meet the PBR requirements.
- There is no annual fee associated with a Permit-by-Rule.





Air Permitting Approvals – PBR

What are the advantages of operating under the Permit-by-Rule programs?

- Sources operating under the Permit by Rule program do not need to request IDEM approval for future source modifications, so long as the following conditions are met:



- **For 326 IAC 2-10:**

Actual emissions remain less than 20% of major source threshold levels and the modification is not subject to a federal rule.

- **For 326 IAC 2-11:**

The source is still able to comply with the source specific provisions in 326 IAC 2-11.

Note: If a source would no longer be able to comply with the Permit-by-Rule program after completing a modification, then the modification must be pre-approved and the source must apply for another type of operating permit program.



Air Permitting Approvals – PBR

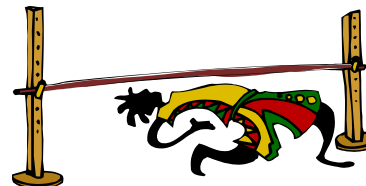
What are the disadvantages of operating under the Permit-by-Rule programs?



- Under the Permit-by-Rule program, the source must keep sufficient records of actual emissions in order to demonstrate compliance within 30 days of a request by IDEM.



- The limits included in the Permit-by-Rule are generally lower than the limits that would be included in a FESOP.



- For 326 IAC 2-11, the source has less flexibility than under the FESOP program, since the source must comply with the limits as they are written in the rule.



Air Permitting Approvals – Interim

Interim Operating Permit Revision Approvals

If a source wishes to modify the source or construct a new emissions unit in an expedited time frame, the source can obtain approval to construct the modification prior to the issuance of a source modification/permit modification by petitioning for an Interim operating permit revision approval (MSOP or FESOP) or source modification approval (Title V Permits).

- A source can request an Interim operating approval if the source is already operating under a valid operating permit. If granted, the source can construct new equipment with Interim operating permit revision approval. However, the source can not operate new equipment until the permit revision has been issued, which may require public notice.





Air Permitting Approvals – Interim

- Interim operating approval written petition includes:
 - Type of operating permit revision.
 - Documentation to assure the operating change does not qualify as major PSD source, Major PSD modification, or a major source for HAPs.
 - All conditions to satisfy NSPS, NESHAP, or other state rules.
 - Statement of consent to federal enforceability of interim approval.
 - Authorized agent's signature.
 - Notarized affidavit stating applicant accepts risk to construct prior to modification approval.



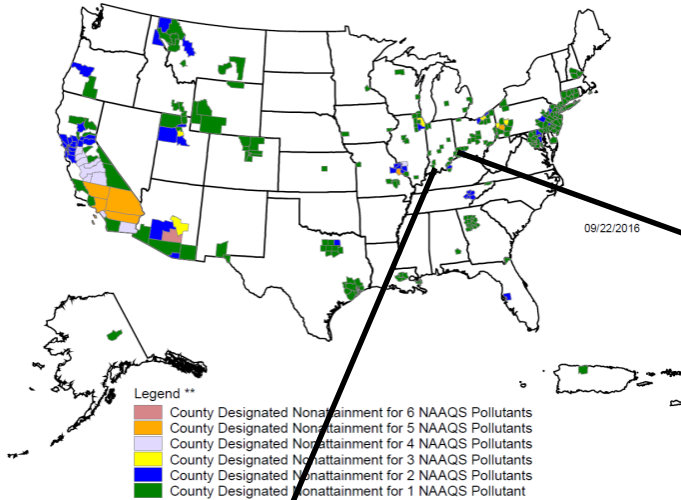
Major New Source Review (NSR)

- Major New Source Review (NSR)
 - Required for a proposed new source and significant modifications.
 - Required for sources in attainment and nonattainment areas (NAA).
 - Permits for sources in attainment areas are Prevention of Significant Deterioration (PSD) permits and require Best Achievable Control Technology (BACT).
 - Permits for new sources in NAA must meet the Lowest Achievable Emissions Rate (LAER).
 - Permits for existing sources in NAA must meet the Reasonably Available Control Technology (RACT)

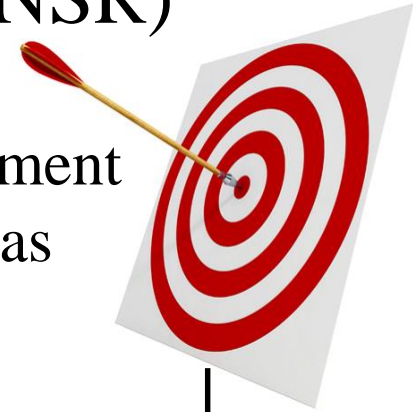


Major New Source Review (NSR)

Counties Designated "Nonattainment"
for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *



Attainment Areas



– Regulated by 326 IAC 2-3
Emission Offset for pollutant(s)
exceeding the threshold levels for
which county is in nonattainment

– Existing
Sources subject
to RACT

– New Sources
subject to
LAER

– Regulated
by 326 IAC
2-2 (PSD)

– Applies to
any regulated
pollutant
exceeding the
threshold
levels for
which county
is in
attainment

– Regulated by 326 IAC
2-2 (PSD) only

– Applies to any regulated
pollutant exceeding the
threshold levels

– Subject to BACT



Prevention of Significant Deterioration (PSD)

In accordance with 326 IAC 2-2, a Prevention of Significant Deterioration (PSD) permit approval is required when construction or modification of a major source is to take place in an area of NAAQS attainment.

PSD Permit Thresholds	
Any of the 28 stationary source categories identified in 326 IAC 2-2-1(ff)(1)	100 tpy or more of any regulated NSR pollutant (fugitives included)
Any other stationary source	250 tpy or more of a regulated NSR pollutant
Lead emissions from primary lead smelters, secondary lead smelters, primary copper smelters, lead gasoline additive plants, and lead-acid storage battery manufacturing plants that produce 2,000 or more batteries per day	5 tpy or more of lead or lead compounds (measured as elemental lead)
Lead emissions from any other stationary source	25 tpy or more of lead or lead compounds (measured as elemental lead)
Any physical change at a stationary source not described above, if the change itself would qualify as a major PSD source under the aforementioned descriptions.	



Prevention of Significant Deterioration (PSD)

- Since PSD rules allow for reductions in potential emissions due to federally enforceable restrictions on operating time, process rates, or emissions controls, it is possible for a major PSD source to avoid PSD regulations by voluntarily accepting federally enforceable emissions limitations to become a “Minor” PSD source. (< 250 tpy or or <100 tpy (if 1 of 28))
- Once a source becomes “Major” for PSD, Any physical changes or change in the method of operation resulting in a significant emissions increase and a significant net emissions increase of a regulated NSR pollutant is considered a major modification.



Prevention of Significant Deterioration (PSD)

- Major modifications
 - Exceptions include:
 - Routine maintenance, repair, and replacement.
 - Use of alternative fuels or raw materials.
 - Increase in hours of operation or production rate.
 - Change in ownership.
 - Certain clean coal technology projects.

Existing sources can use an actual-to-projected-actual test, and new units may use an actual-to-potential-applicability test to determine if a significant emissions increase will occur. This process is described more fully in the [NSR Reform Training Manual](#).



Prevention of Significant Deterioration (PSD)

PSD Significant Emissions Increase Threshold	
CO	100 tpy
NO _x	40 tpy
SO ₂	40 tpy
Particulate Matter (PM)	25 tpy
PM ₁₀	15 tpy
PM _{2.5}	10 tpy direct PM _{2.5} (or 40 tpy of SO ₂ and 40 tpy of NO _x)
Ozone (measured as VOCs or NO _x)	40 tpy
Lead (Pb)	0.6 tpy
Greenhouse Gases	75,000 tpy CO ₂ e
Asbestos	0.007 tpy
Beryllium	0.0004 tpy
Mercury	0.1 tpy
Vinyl Chloride	1 tpy
Fluorides	3 tpy
Sulfuric acid mist	7 tpy
Hydrogen Sulfide	10 tpy
Total reduced sulfur (including hydrogen sulfide)	10 tpy
Reduced sulfur compounds	10 tpy
Ozone-depleting substances	100 tpy



Nonattainment New Source Review

New major sources or major sources with a modification that increases the emissions of a nonattainment pollutant in a designated Nonattainment Area (NAA) for that pollutant, will require a Nonattainment Area New Source Review (NAA NSR) permit or modification.

Nonattainment Area NSR Thresholds	
Any stationary source or any physical change at a stationary source	100 tpy of any regulated pollutant
In ozone nonattainment areas	VOC or NOX: Marginal –100 tons per year (tpy) Moderate – 100 tpy Serious – 50 tpy Severe – 25 tpy
Lead emissions from primary lead smelters, secondary lead smelters, primary copper smelters, lead gasoline additive plants, and lead-acid storage battery manufacturing plants that produce 2,000 or more batteries per day	5 tpy or more of lead or lead compounds (measured as elemental lead)
Lead emissions from any other stationary source	25 tpy or more of lead or lead compounds (measured as elemental lead)



Nonattainment New Source Review

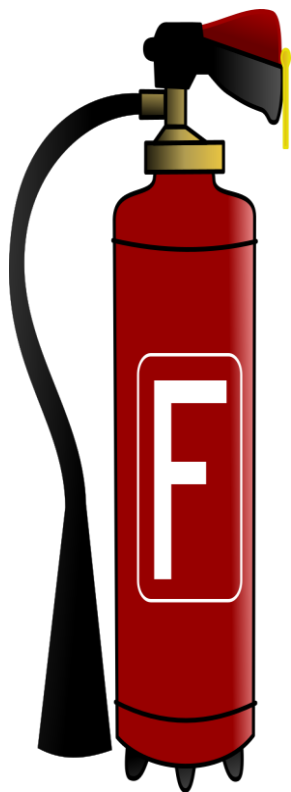
Major NAA NSR modifications are subject to IDEM approval. The definition for a major modification under NAA NSR is similar to the major PSD modification definition. There are some differences in the significant emissions increase thresholds because Nonattainment Areas only concern regulated pollutants for which a NAAQS has been established. (Other pollutants that are above the thresholds for PSD for which the area is in attainment may be subject to PSD requirements as well.)

NAA NSR Significant Emissions Increase Thresholds	
Carbon monoxide	100 tpy
Nitrogen oxides	40 tpy
Sulfur dioxide	40 tpy
Particulate Matter	25 tpy
PM ₁₀	15 tpy
PM _{2.5}	10 tpy direct PM _{2.5} (or 40 tpy of SO ₂ and 40 tpy NO _x)
Ozone (measured as VOC or NO _x)	40 tpy
Lead	0.6 tpy



Other Permitting Considerations – Open Burning

- Open burning
 - Open burning is prohibited by 326 IAC 4-1.
 - Open burning allowances
 - Employee fire extinguisher training with clean petroleum fuels.
 - Request variance; examples include:
 - Fire training burns.
 - Clearing natural growth.
 - Disposal of explosives.





Other Considerations – Fugitive Dust

– Generation of particulate matter that escapes beyond the property line.



- Subject to enforcement action.
- Few exceptions found in 326 IAC 6-4-6.
- Steam not in combination with any other pollutants.
- Fugitive dust from publicly maintained unpaved thoroughfares (as long as no nuisance or public health risk is present).
- Fugitive dust from construction or demolition activities where every reasonable precaution has been taken to minimize fugitive dust emissions.
- Fugitive dust from agricultural operations where every reasonable precaution has been taken to minimize fugitive dust emissions.
- Visible plumes from stacks or chimneys that provide for adequate dispersion.
- Fugitive dust from a source caused by adverse meteorological conditions (e.g., high winds).



Other Permitting Considerations – Fugitive Dust

- Sources of fugitive dust in nonattainment areas are regulated under 326 IAC 6-5-1 if they have potential fugitive particulate matter emissions of 25 tons per year or more.
- These sources are required to submit fugitive dust control plans (or request an exemption from this requirement), which outline the sources planned control measures.
- Control plans must be submitted in writing from a source to the OAQ, include specific information about the source and the activities onsite, must be approved by the OAQ (the Commissioner's delegated authority), and must be updated upon permit renewal.

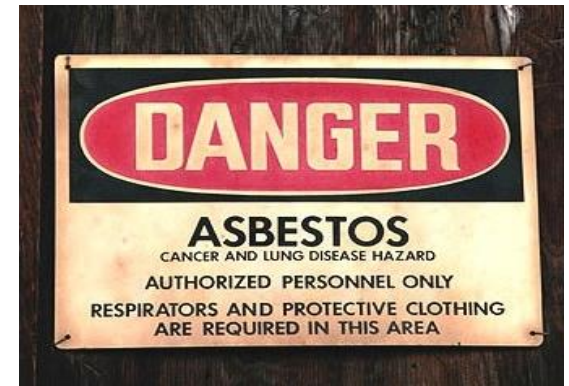


Other Permitting Considerations – Asbestos



Asbestos is a naturally occurring mineral fiber that has been used in a wide variety of building materials to help insulate and reduce heat.

When an asbestos containing product is disturbed or damaged, asbestos fibers become airborne and may be inhaled into the lungs. The inhalation of asbestos fibers can result in significant health effects. Asbestos is a known carcinogen.





Other Considerations – Asbestos

The IDEM Asbestos Program conducts compliance inspections, licenses companies and individuals directly involved with asbestos abatement, and audits licensed asbestos training course providers.



Regulated demolition activities require notification to IDEM, regardless of whether the inspection reveals the presence of asbestos. A written notification is also required for renovation activities that involve stripping, removing, cutting, drilling or similarly dislodging/disturbing a minimum of 260 linear feet, 160 square feet or 35 cubic feet of regulated asbestos containing material (RACM).





Compliance Inspections – What to Expect When the Inspector Comes

- The inspector will consult with the environmental manager(s) at a source in a pre-inspection conference.
- The inspector and interested parties will conduct a plant tour.
- The inspector will conduct a records review based on the recordkeeping requirements in the source's permit.
- A closing conference will be held in order to clarify, summarize or seek additional information (from both sides).
- The inspector will construct an inspection summary letter outlining the findings of the visit. This document will be sent to the source no later than 45 days after inspection.



Top 10 Inspection Tips



1. Review and understand your permit terms.
2. Call your inspector, permit writer, or Compliance and Technical Assistance Program (CTAP) with questions.
3. Request a compliance assistance visit – CTAP (before you have an inspection).
4. Have backup personnel available for inspections.
5. Know where environmental records and plans are maintained and make them easily accessible to appropriate personnel.





Top 10 Inspection Tips



6. Be aware of permitted emission unit and control device descriptions and locations – if you notice something isn't in your permit, request a modification ASAP to get it added to the permit.
7. Understand stack testing requirements and timelines.
8. Federal regulations—applicability, incorporation, and compliance.
9. Have a plan in place for when problems occur.
10. Submit required reports by applicable due dates.



Enforcement

IDEM has made
enforcement information
available.

[Searchable Enforcement Database](#)

Monthly Actions and Orders

middle of the month. Using the form below, you can search a database of those published actions and orders. Year appears on that list but is not hyperlinked, that means the document will be published with the next cycle.

[Search Tips](#)

Company Name/Person: <input type="text"/>	
Case Number: <input type="text"/>	
Old Case Number: <input type="text"/>	
County: <input type="text" value="All"/>	
Media of Interest: <input checked="" type="radio"/> All <input type="radio"/> Air <input type="radio"/> Water <input type="radio"/> Hazardous Waste <input type="radio"/> Solid Waste/Underground Storage Tank	Type of Actions/Orders: <input checked="" type="radio"/> All <input type="radio"/> Notice of Violation <input type="radio"/> Agreed Order <input type="radio"/> Commissioner's Order <input type="radio"/> Emergency Order
Start Date: Jan <input type="text" value="01"/> 2017 <input type="text" value=""/> End Date: Jan <input type="text" value="19"/> 2017 <input type="text" value=""/>	
Output format: <input type="radio"/> All Records <input checked="" type="radio"/> 50 records/page	
For questions about these reports or reports prior to 1997, Please contact the proper department: Air, Goldie Roberts, (317) 233-5523 Land, Donna Bates (317) 233-5529 Water, Rose Wheat (317) 233-5525	

Why does IDEM take enforcement actions?

- ✓ Achieve compliance,
- ✓ Deter future violations, and
- ✓ Result in an improved environment.



Enforcement

Understanding the Enforcement Process

Violation Letters (VL) are the first step in corrective action for minor violations issued by the compliance branch (inspectors) and are not considered an official enforcement action.

Enforcement Actions taken by the agency:

- Notice of Violation (NOV): Informs the Respondent that IDEM believes violations of environmental laws or regulations have occurred.
- Agreed Order: Respondent has a 60-day settlement period after receiving an NOV in which to enter into an Agreed Order with IDEM. Agreed Orders contain steps the Respondent must take to comply with the law.
- Commissioner's Order: This is a unilateral order requiring specific action to correct a violation and/or pay a fine. Commissioner's Orders are issued when a Notice of Violation is not settled by an Agreed Order.



Enforcement

Understanding the Enforcement Process

Enforcement Actions taken by the agency:



- Emergency Order: An Emergency Order is a formal enforcement action that may be issued by IDEM (or other state agency) if an emergency exists, or a statute authorizes the agency to issue a temporary order to take immediate action to cease activities causing violations where human and/or environmental health is threatened. Emergency Orders expire after 90 days.
- Judicial Order: Any Order issued by a court of record, such as a Superior Court or Circuit Court. This would not include an order issued by an administrative court such as the Office of Environmental Adjudication.



Enforcement

Understanding the Enforcement Process

Enforcement Actions taken by the agency:

- Fines: Although state law authorizes fines up to \$25,000 per day per violation, most are much less. The amount of the fine depends on the magnitude of the violation, the potential harm to human health and the environment, the economic benefit gained by the violator by not complying, and the violator's efforts to achieve compliance (See Civil Penalty Policy).





Who can help me with specific questions about my business?



IDEM's Compliance and Technical Assistance Program (CTAP)





Compliance and Technical Assistance Program (CTAP)

The Compliance and Technical Assistance Program (CTAP) provides assistance to help Indiana businesses understand and comply with environmental regulations. It is important to note the following about CTAP assistance:

- **Nonregulatory** – CTAP staff members are not regulators and do not have regulatory authority. Therefore, businesses will not be penalized for reporting relevant environmental information to CTAP when requesting assistance.
- **Free and Confidential** – While CTAP staff members serve as liaisons between the regulatory programs and businesses, they do not provide any details about the company to regulators, as the information is protected under Indiana Code 13-28-3-4.



Compliance and Technical Assistance Program (CTAP)

- **Assistance** – CTAP staff members provide assistance through on-site visits or via phone and will provide a full compliance review or just target a single issue. They also develop training programs, brochures, and webinars to help businesses understand the state and federal environmental regulations that affect them.
- **Multimedia** – CTAP staff members are knowledgeable in air, water, land, and Community-Right-to-Know regulations and are happy to answer questions in these areas.

CTAP staff members provide assistance to businesses that contact them directly, are referred by regulatory inspectors or permit writers, or are impacted by a new U.S. EPA or state regulation.

Contact us if you need assistance

Hotline: (800) 988-7901

Email: CTAP@idem.IN.gov

Website: www.idem.IN.gov/ctap



Questions About This Presentation?



ANGELA TAYLOR

**CTAP SMALL BUSINESS LIAISON
ASSISTANCE AND OUTREACH BRANCH
OFFICE OF PROGRAM SUPPORT**

INDIANA DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT (IDEM)

100 N. Senate Ave, IGCN, Suite 1316

Indianapolis, IN 46204

Ph. (317) 233-0572

Fax (317) 234-8752

ataylor@idem.IN.gov



FIN



- **Thank You** for your Participation!
- Please fill out the after class survey that will be sent to you via email next week.
- Look for new featured topics on our website about the industries/processes of interest that you mentioned in the pre-class survey.