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# **32<sup>nd</sup> Annual Conference on Air, RCRA, & Water Permits - Environmental Permitting in Ohio**

**Workshop G - Best Practices in Air Permitting &  
Compliance - PTE Focus**

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**July 20, 2023**

# Introduction and Topics

**William Bruscano, PE**  
Principal Consultant  
Trinity - Columbus

**Brent Goetz**  
HSEQ Manager  
Covestro Hebron Plant

**Bob Hodanbosi**  
Chief, Permitting  
Ohio EPA, DAPC

- **Bob Hodanbosi**
  - ❖ PTE Definitions and Categories
  - ❖ Common PTE Examples
- **Brent Goetz**
  - ❖ Successful Air Permitting at Your Facility
- **Bill Bruscano**
  - ❖ BMP's for Determining PTE
  - ❖ How PTE Impacts on Your Permit Type

# Environmental Permitting 2023 Workshop G

Robert Hodanbosi, Chief  
Division of Air Pollution Control  
Ohio EPA



# Topics

- Multiple PTE Definitions
- Unique PTE Calculations
- PTE Guidance Memos



# MULTIPLE PTE DEFINITIONS

# Multiple PTE Definitions

- Different rules have different PTE definitions
- Must review the PTE definition for the rule
- Unique PTEs
  - De Minimis (OAC rule 3745-15-05(A)(6))
  - NSR rules (3745-31-01(BBBBB))
  - SB 265 for <10 ton BAT (ORC 3704.03(T); OAC 3745-31-05(A)(3)(ii))
  - Title V (3745-77-01)
  - MACT (40 CFR 63.2)

# De Minimis

- OAC rule 3745-15-05(A)(6))
- Based on 24-hour and Annual
- Don't count control unless integral
- Operate equipment at max rated capacity
- Calculate:
  - 24-hour for each criteria (10 lb/day)
  - Combined similar source annual PTE (25 ton/yr)
  - Annual PTE for combined HAPs (1 ton/yr)

# NSR Rules

- 3745-31-01(BBBBBB)
- Assume maximum allowable emissions – 24 hours/365 days per year.
- Applies to PSD, NNSR, netting, syn minor
- Use physical and operational design
- Include control equipment (assuming will be or is required in permit)
  - Note: some states do not include control equipment



# NSR Rules

- Include federally enforceable or legally and practically enforceable by the state rule limits
- Include synthetic minor limits assuming they were established with a comment period
- Don't count secondary emissions (construction or other emissions from non emissions units.)

# <10 ton/yr BAT Exemption PTE

- ORC 3704.03(T); OAC 3745-31-05(A)(3)(ii)
- Calculation to determine if you qualify for the <10 ton/yr BAT exemption
- Installed or modified after August 3, 2006
- Use equipment capacity
- 24 hr/day; 365 day/yr operation
- Include the use of controls

# Title V

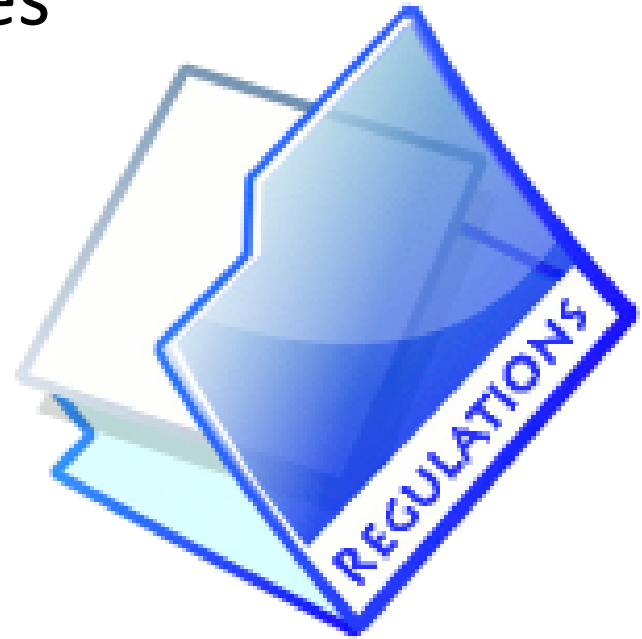
- 3745-77-01(DD)
- Emissions unit by emissions unit PTE totaled to get facility-wide calculation
- Use physical and operation maximum design capacity
- Utilize federally enforceable rules (MACT, NSPS, etc.)

# Title V

- Calculate uncontrolled emissions unless the controlled emissions were established with a comment period and are federally enforceable or state legally and practically enforceable
  - See EG #80 Title V section for a detailed explanation
- Use federally enforceable or state legally and practically enforceable restrictions

# Title V

- Listed uncontrolled fugitives must be included
- Exclude secondary emissions (construction or non emissions unit emissions)
- EG #61 <20% presumed inherent physical limitation



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# Presumed Inherent Physical Limitation

- Calculate actual emissions – not PTE
- Actual emissions < 20% of each of the TV thresholds?
  - 100 ton/yr each criteria
  - 25 ton/yr individual or combined HAP
- If so, facility can be non-Title V
- Notify Ohio EPA contact
- Keep actual records

# MACT

- Annual emissions
- Use physical and operational maximum design capacity
- Calculating annual individual HAP and annual combined HAPs
- After controls
- Use federally and state legally and practically enforceable limits

# What about fed PSD/NNSR Rules?

- Federal PSD (40 CFR 52.21) and NNSR (40 CFR 51, Appendix S) do not apply in Ohio
- Ohio's NSR program is fully approved
- Use Ohio's NSR rules instead
  - OAC 3745-31-01
  - OAC 3745-31-10 through 20 PSD
  - OAC 3745-31-21 through 27 NNSR
- Use Ohio PTE definitions (similar to fed)



# Guidance on This?

- Ohio EPA Engineering Guide #80, “How should PTE be calculated for determining the applicability of De Minimis Status, BAT, Senate Bill 265 BAT Exemption, Title V, Maximum Achievable Control Technology, Prevention of Significant Deterioration and Non-Attainment New Source Review?”

# Fed/State Enforceable BAT?

- What about BAT in permits that don't go draft? Can the limits be used to limit PTE?
- If they have appropriate state legally and practically enforceable limits --- YES
- BAT rule is in the federally approved Ohio SIP

# Fed/State Enforceable BAT?

- See Question 28 from the Feb. 7, 2014 BAT guidance
  - <https://www.epa.ohio.gov/dapc/sb265>
- Synthetic minor restrictions must still go draft

# UNIQUE PTE CALCULATIONS

# Degreasers and Cold Cleaners

- Rules have control equipment requirements
- No rule emission limits
- PTE based on usage of solvent minus solvent disposed



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# Degreasers and Cold Cleaners

- Application asks for:
  - Solvent name
  - Maximum gallons used / yr
  - Solvent density lb/gal
  - Solvent disposed of (gallon/yr)
  - Solvent content of the waste (% by volume)

# Degreasers and Cold Cleaners

- Known:

- 300 gallons/yr used

- 7.0 lb solvent/gallon

- 20 gallon waste/yr disposed

- 10% gallon solvent/gallon waste

- $300 \frac{\text{gal}}{\text{yr}} - 20 \text{ gal} \frac{\text{waste}}{\text{yr}} * 0.1 \frac{\text{gal solvent}}{\text{gal waste}}$

- $298 \frac{\text{gal emitted}}{\text{yr}} * 7.0 \frac{\text{lb solvent}}{\text{gal}} = 2086 \text{ lb/yr}$

# Printing Lines

- Variables: line speed, # colors, % coverage, VOC content, fountain solution, etc.
- EG #68
- Base on inherit press capacity and historic material usage



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# Printing Lines

- Acceptable assumptions listed in guide
  - 95% ink OC retained in the web
  - 100% fountain solution emitted
  - % clean-up solvent emitted
    - VP <10mm hg, assume 50% emitted
    - VP >=10 mm hg, assume all emitted
- EG has several forms to aid in calculations
- Worked with the Printing Industry of Ohio to develop

# Coating Operations

- Lots of variables: line speed, VOC content, part size, paint thickness, thinners
- Can't assume paint gun open 24/7
- EG #45 defines approach
  - <https://epa.ohio.gov/Portals/27/engineer/eguides/GUIDE45.pdf>



# Coating Operations

- Operating scenario that results in the most coating/solvent used
- Maximum practical speed for which acceptable parts can be painted
- Assume 24/365 operation unless restricted
- EG #45 has calculation methods

# Hazardous Air Pollutants for Coating Operations

- Mixture of solvents/HAPs in paints
- Each solvent/HAP has its own density
- Often use multiple coatings
- PTE of individual HAPs and combined HAPs needed

# Hazardous Air Pollutants for Coating Operations

- Too many variables to establish HAP usage restriction
- How is this done?
- PTE is calculated based on maximum expected usage
- Similar to coatings... use highest HAP emitting operating mode

# Hazardous Air Pollutants for Coating Operations

- Calculate highest hourly; them multiply by 24 hr/day, 365 day/yr
- Result is ton/yr for Individual HAPS and Combined HAPS
- Good thing we have spreadsheets!



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# Paint and Body Shops PBR

- Qualify for PBR – don't need to do PTE calc.
- Meet qualifying criteria
  - $\leq$  two booths;  $<50$  jobs/week;  $<3,000$  gal/yr coatings, solvents etc; vent sys.; type spray gun; exhaust fan/stack
- Submit request to be covered by PBR
- <https://epa.ohio.gov/portals/41/sb/publications/AutobodyPBRGuide.pdf>

# PTE GUIDANCE MEMOS



# PTE Guidance Memos

- June 13, 1989 Hunt/Seitz memo, “Guidance on Limiting Potential to Emit in New Source Permitting”
- January 22, 1996 Seitz memo, “Release of Interim Policy an [SIC] Federal Enforceability of Limitations on Potential to Emit”

# PTE Guidance Memos

- January 25, 1995 Stein memo, “Guidance an Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits”
- August 29, 1996 Seitz memo, “Clarification of Methodology for Calculating Potential to Emit (PTE) for Batch Chemical Production Operations”

# PTE Guidance Memos

- April 14, 1998, Seitz memo, “Potential to Emit (PTE) Guidance for Specific Source Categories”
- January 25, 1996 Seitz memo, “Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act)”

# PTE Guidance Memos

- Ohio EPA Engineering Guide #61, “What is Ohio EPA's policy for limiting the potential to emit (PTE) of air contaminant emissions at a facility for purposes of avoiding federal permitting?”
- Ohio EPA Engineering Guide #45, “Calculating Potential to Emit for Coating Lines”

# PTE Guidance Memos

- Ohio EPA Engineering Guide #4, “Should organic compounds such as methane, ethane, 1,1,1-trichloroethane, methylene chloride and trichlorotrifluoroethane be excluded when calculating “potential to emit” (PTE) in order to determine the applicability of OAC rule 3745-21-07 or OAC rule 3745-21-09?”

# Need Help?

- Guidance:
  - <https://epa.ohio.gov/dapc/engineer/eguides>
  - <https://www.epa.gov/nsr/new-source-review-policy-and-guidance-document-index>
  - <http://ohioepa.custhelp.com/app/home>
- Permit-Specific
  - Consultant
  - District Office or local air agency permit contact
  - OCAPP

# Questions?

- Robert Hodanbosi, P.E.
- Chief, Division of Air Pollution Control
- Ohio EPA
- 50 West Town St. Suite 700
- Columbus, Ohio 43215
- 614-644-2270
- [robert.hodanbosi@epa.ohio.gov](mailto:robert.hodanbosi@epa.ohio.gov)
- [www.epa.ohio.gov](http://www.epa.ohio.gov)



# Successful Air Permitting at Your Facility

**Brent Goetz**  
HSEQ Manager,  
Covestro, LLC





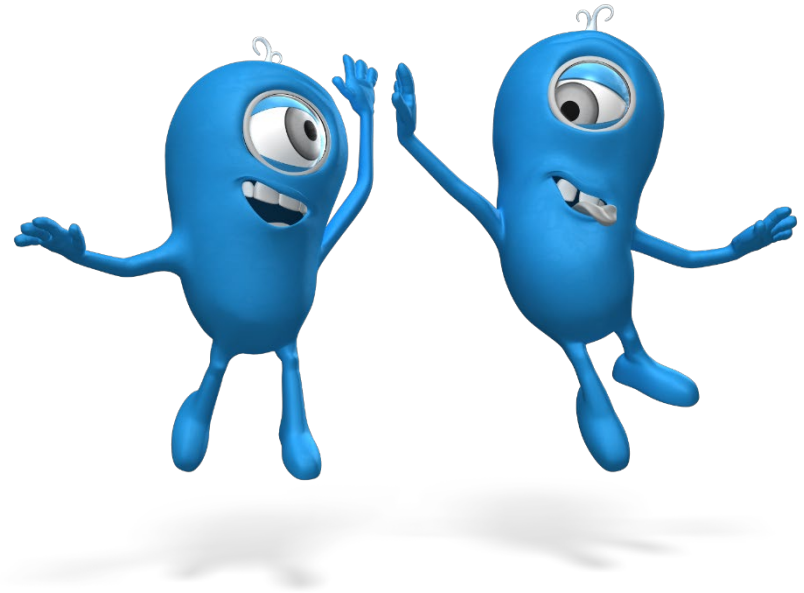
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# Key Factors in Successful Air Permitting at Your Facility



- **Know your permits**
- **Know your facility**
- **Develop relationships and educate**
- **Establish and maintain great partnerships**
- **Establish a reliable system for organizing and maintaining permitting requirements**
- **Include environmental in project planning**



# Know Your Permits

- **Develop an understanding of the evolution of your permits**
- **Thoroughly review your existing permits**
  - What are your permit limits?
  - What are your inspection requirements?
  - What are your reporting requirements?
  - When is your renewal date?
- **Review any past correspondence including applicable reporting**
- **Review your facility's air services profile**



# Know Your Facility

- Find great resources and don't be afraid to ask questions
- Get out into the plant
- Review all applicable Piping and Instrumentation Diagrams (P&IDs)
- Get involved in projects that help you understand the process



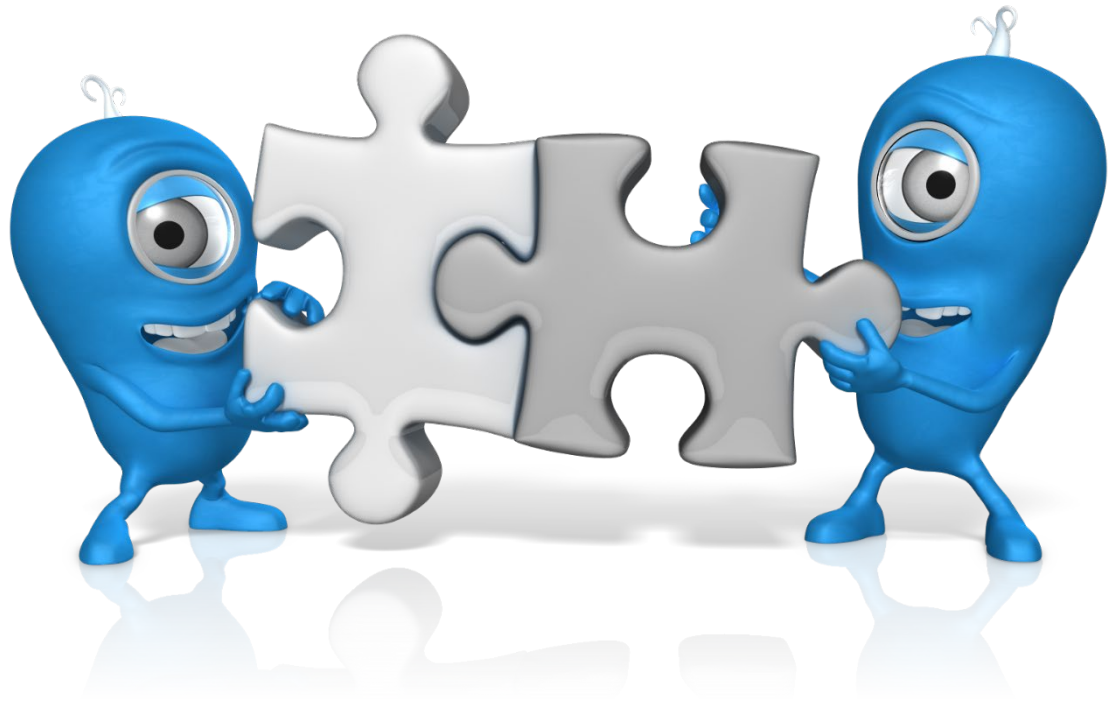
# Develop Relationships and Educate

- Talk to people and Listen
- Understand that your job is environmental
- Make compliance as simple as possible
- Educate
  - Training
  - Lunch & Learns
  - Weekly tips/shift starters
- Communicate inspection findings and assign corrective actions



# Establish and Maintain Great Partnerships

- **Internal corporate experts**
- **Outside consultants**
- **Regulatory partners**



# Establish Reliable Systems For Organizing and Maintaining Permit Requirements

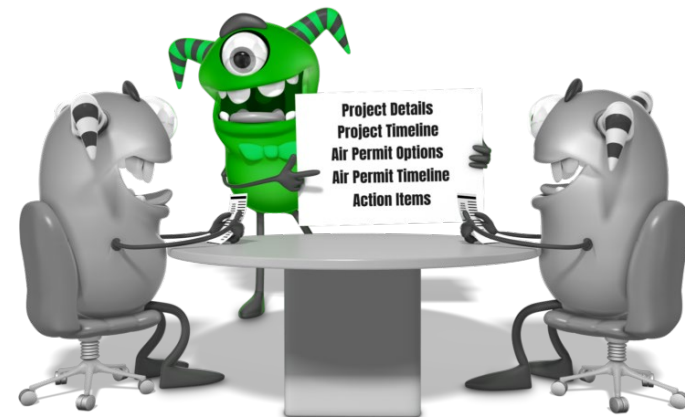
- **EMS software**
- **Organized files**
- **SOPs**
- **System for developing and tracking of corrective actions**



# Including Environmental in Project Planning



- **Environmental considerations should be included as early as possible in project planning**
- **Environmental specifics should be nailed down as close as possible to project details being locked in while still allowing enough time for the permits to meet project timelines**
- **Inclusion of environmental considerations in Management of Change (MOC)**
- **Sometimes you have to insert yourself into the project**







## Bringing it all together

### Scenario:

A project team approaches you regarding the installation of a new product line, the timeline for getting the permits is tight as they are needed before the project can move to the next phase. You are unsure about permitting applicability for the project.

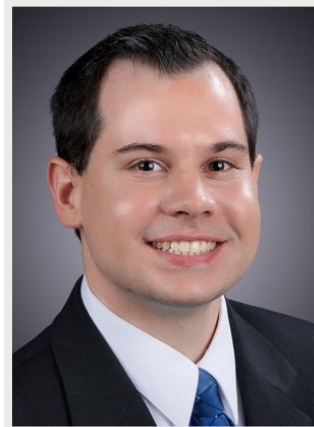
**It's not Dev! Know your permit's for educating  
and maintaining permit requirements**

# QUESTIONS??



# Workshop G – Best Practices in Air Permitting & Compliance – PTE Focus

July 20, 2023



**Bill Bruscano**

**Trinity – Columbus Office**

**(614) 433-0733**

**[bbruscino@trinityconsultants.com](mailto:bbruscino@trinityconsultants.com)**



[trinityconsultants.com](http://trinityconsultants.com)

# Know Your Facility

- ▶ Know your process
- ▶ Know your permit:
  - State and federal rules
  - Emission limits
  - Operational restrictions
  - Synthetic minor limits
- ▶ Know your facility's source status (major/minor/synthetic minor with respect to Title V, HAP, and NSR)
- ▶ Know your facility's Standard Industrial Classification (SIC) code or NAICS code

# PTE Calculations – BMP's



# How to Calculate Facility-Wide PTE

- 1) Conduct a facility-wide inventory of emission sources
- 2) Identify any legally enforceable limitations
- 3) Choose emission calculation methodologies
- 4) Gather necessary process data
- 5) Calculate PTE for each emission source
- 6) Calculate total site-wide PTE for the facility



# Standard Emission Calculation Methods (1/2)

- ▶ Mass balance
  - Typically used for coating and solvent use operations
  - Typically assume 100% of organics emitted or directed to control device
- ▶ Stack tests
  - Best if normalized to production rate to develop an appropriate emission factor
- ▶ Grain loading
  - Provide PM emissions in terms of grains per unit of air flow (e.g., gr/dscf)
  - Typically based on vendor guarantee for control device
- ▶ Emission factors
  - Provide emissions in mass per unit production basis that can be scaled to different throughputs (e.g., lb/MMBtu, lb/ton)
  - AP-42 (<https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-Compilation-air-emissions-factors>) & WebFIRE (<http://cfpub.epa.gov/webfire/>) are most common EPA references containing emission factors

# Standard Emission Calculation Methods (2/2)

- ▶ Tank Calculations (AP-42 chapter 7.1 – last updated in 2020)
  - TankESP
  - U.S. EPA TANKS 4.09d (outdated – latest version from 2006)



- ▶ Wastewater Treatment Processes
  - Toxchem
  - U.S. EPA Water9



- ▶ Batch Emission Calcs
  - Emission Master



- ▶ Other
  - ChemCAD
  - ProMax





# Emission Calculations

- ▶ Goal:
  - Ultimate operational flexibility
- ▶ Potential-to-Emit (PTE)
  - For maximum flexibility, permit the source at its PTE
  - You can account for any applicable emission limits in this calculation
  - Using PTE will limit recordkeeping burdens and/or testing requirements in your PTI/PTIO
  - Caution: watch out for multiple operating scenarios

## PTE Example

---

**From:** #1 Design Engineer

**Sent:** Friday, August 20, 2021 4:30 PM

**To:** Environmental Team

**Subject:** New Coating Line - Need Approval

To whom it may concern in the Environmental Group:

We would like to start-up a new coating manufacturing line.  
Running coatings A, B, C, D, E, and F.  
Need approval ASAP.

Thanks,  
#1 Design Engineer

## Example for PTE -> Coating Speciation

### ► Coating specifications:

Coating	PM	VOC	Toluene	Xylene	Styrene	Total HAP
A	1%	20%	15%	0%	0%	15%
B	2%	30%	10%	12.5%	0%	22.5%
C	3%	10%	0%	0%	10%	10%
D	4%	15%	10%	0%	0%	10%
E	5%	5%	0%	5%	0%	5%
F	6%	10%	0%	0%	5%	5%

## Example for PTE -> Coating Speciation

► Coating specifications with throughput:

Coating	Throughput (Mgal/yr)	PM	VOC	Toluene	Xylene	Styrene	Total HAP
A	100	1%	20%	15%	0%	0%	15%
B	10	2%	30%	10%	12.5%	0%	22.5%
C	100	3%	10%	0%	0%	10%	10%
D	200	4%	15%	10%	0%	0%	10%
E	50	5%	5%	0%	5%	0%	5%
F	20	6%	10%	0%	0%	5%	5%

## Regulatory Applicability - BMP

- ▶ Stay on top of federal and state regulatory changes
  - Promulgated NSPS Rules
  - MACT RTR
  - OIAI (Once in Always In) MACT Policy
  - NAAQS Review
- ▶ Use subscription service or regulatory e-news from industry groups and consultants
- ▶ Take advantage of comment periods to influence new or modified regulations
  - Review state RACT rules for current or new applicability

## Regulatory Applicability - BMP

- ▶ Benefits of rule applicability knowledge:
  - Accept avoidance limits for certain rules
    - ◆ May want to avoid emission controls or mass-based limits
  - Forms basis of PTE calculations
    - ◆ Use regulatory limit, instead of AP-42
  - Steer agency in the right direction as to which applicable requirements should appear in the permit
    - ◆ Can help expedite permit issuance
  - Draft your own terms and conditions!

# PTE and Regulatory Applicability Example

**From:** #1 Design Engineer  
**Sent:** Friday, August 20, 2021 4:30 PM  
**To:** Environmental Team|  
**Subject:** New Coating Line - Need Approval

To whom it may concern in the Environmental Group:

We would like to start-up a new coating manufacturing line.  
Running coatings A, B, C, D, E, and F.  
Need approval ASAP.

Thanks,  
#1 Design Engineer

---

**From:** #1 Design Engineer  
**Sent:** Friday, August 20, 2021 5:30 PM  
**To:** Environmental Team  
**Subject:** New Coating Line - Need Approval

Forgot to tell you – also planning to install 2 new mixers (300 gallons each) and 3 new raw material storage tanks (5,000 gallons each).  
Still need approval ASAP.

Have a great weekend!!!!  
#1 Design Engineer

# Regulatory Applicability Example – MACT HHHHH

*Process vessel* means any stationary or portable [tank](#) or other [vessel](#) with a capacity greater than or equal to 250 gal and in which mixing, blending, diluting, dissolving, temporary holding, and other processing steps occur in the manufacturing of a [coating](#).

*Group 1a storage tank* means a [storage tank](#) at an [existing source](#) with a capacity greater than or equal to 20,000 gal storing material that has a [maximum true vapor pressure](#) of total [organic HAP](#) greater than or equal to 1.9 pounds per square inch, absolute (psia). Group 1a [storage tank](#) also means a [storage tank](#) at a [new source](#) with either a capacity greater than or equal to 25,000 gal storing material that has a [maximum true vapor pressure](#) of total HAP greater than or equal to 0.1 psia or a capacity greater than or equal to 20,000 gal and less than 25,000 gal storing material that has a [maximum true vapor pressure](#) of total HAP greater than or equal to 1.5 psia.

*Group 1b storage tank* means a [storage tank](#) at a [new source](#) that has a capacity greater than or equal to 10,000 gal, stores material that has a [maximum true vapor pressure](#) of total [organic HAP](#) greater than or equal to 0.02 psia, and is not a Group 1a [storage tank](#).

*Group 2 storage tank* means a [storage tank](#) that does not meet the definition of a Group 1a or Group 1b [storage tank](#).

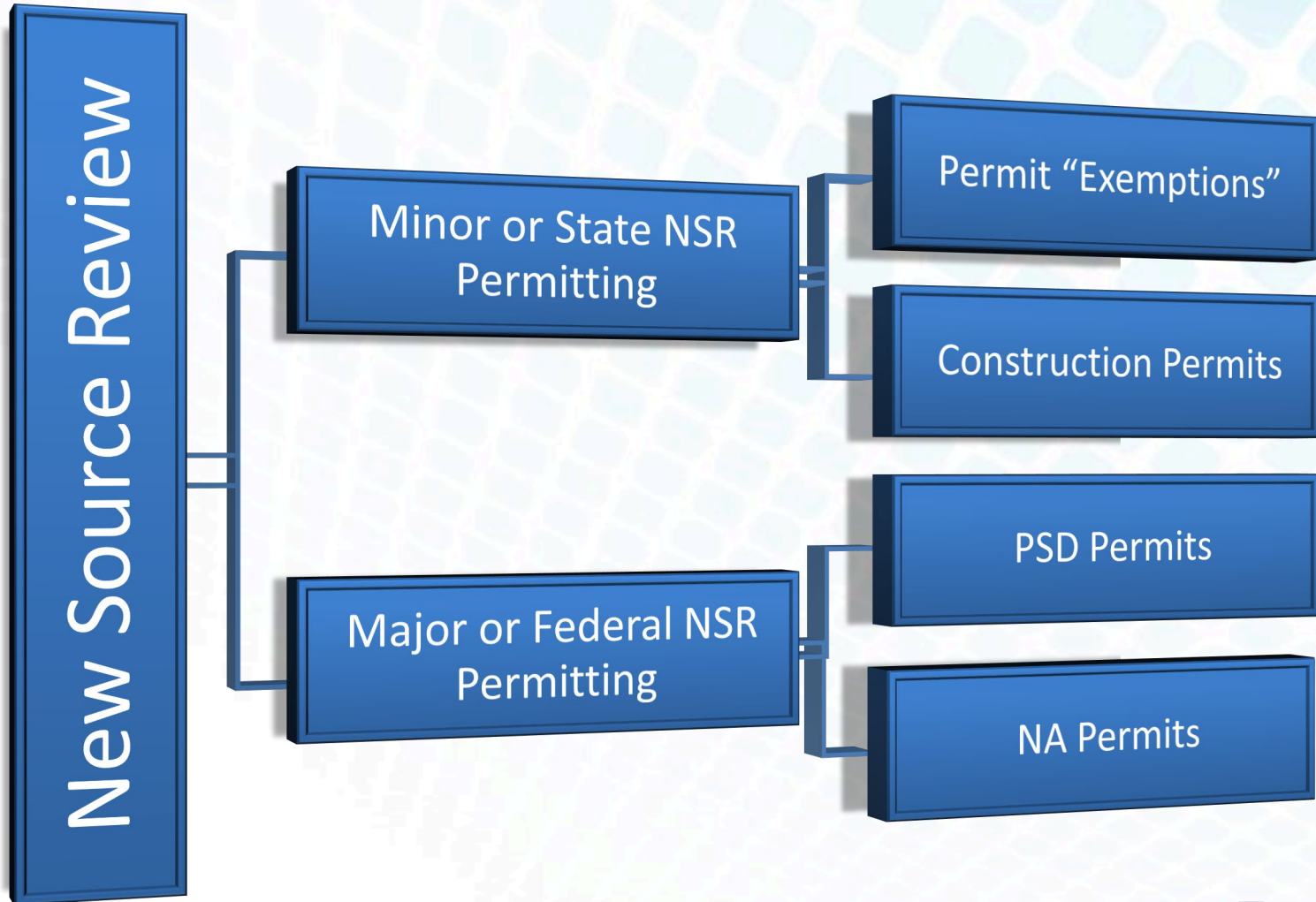


# Regulatory Applicability Example – MACT HHHHH

<p>2. Stationary process vessel at an existing source</p>	<p>a. Equip the vessel with a cover or lid that must be in place at all times when the vessel contains a HAP, except for material additions and sampling; or</p>	<p>i. Considering both capture and any combination of control (except a flare), reduce emissions of organic HAP with a vapor existing pressure <math>\geq 0.6</math> kPa by <math>\geq 75</math> percent by weight, and reduce emissions of organic HAP with a vapor pressure <math>&lt; 0.6</math> kPa by <math>\geq 60</math> percent by weight.</p>
	<p>b. Equip the vessel with a tightly fitting vented cover or lid that must be closed at all times when the vessel contains HAP, except for material additions and sampling</p>	<p>i. Reduce emissions of organic HAP with a vapor pressure <math>\geq 0.6</math> kPa by <math>\geq 75</math> percent by weight, and reduce emissions of organic HAP with a vapor pressure <math>&lt; 0.6</math> kPa by <math>\geq 60</math> percent by weight, by venting emissions through a closed-vent system to any combination of control devices (except a flare); or            ii. Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or            iii. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a condenser that reduces the outlet gas temperature to:</p>
		<p><math>&lt; 10</math> °C if the process vessel contains HAP with a partial pressure <math>&lt; 0.6</math> kPa, or</p>
		<p><math>&lt; 2</math> °C if the process vessel contains HAP with a partial pressure <math>\geq 0.6</math> kPa and <math>&lt; 17.2</math> kPa, or</p>
		<p><math>&lt; -5</math> °C if the process vessel contains HAP with a partial pressure <math>\geq 17.2</math> kPa.</p>

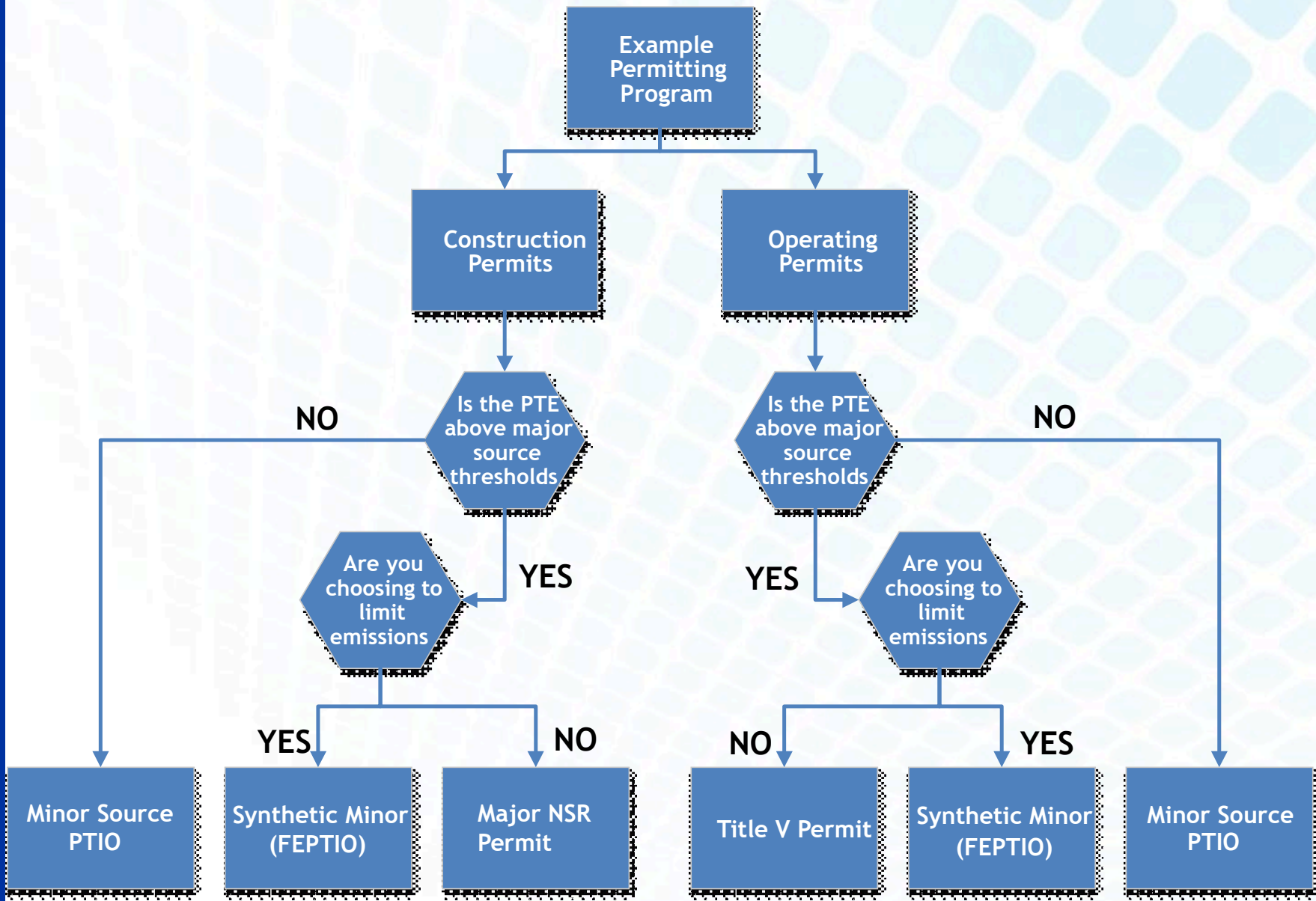
# PTE Impact on Types of Air Permits

# Different Types of Air Permits



# Different Types of Air Permits

Pollutant	Title V	HAP (avoid MACT)	Major NSR (Existing Minor)	Major NSR (Existing Major)
<b>NSR-Regulated</b> (NO <sub>x</sub> , SO <sub>2</sub> , VOC, PM <sub>2.5</sub> /PM <sub>10</sub> , CO, etc.)	>100 tpy	-	>250 (Attainment) >100 (NA/list of 28)	SERs: >40 tpy NO <sub>x</sub> /SO <sub>2</sub> /VOC >100 tpy CO >10/15 tpy PM <sub>2.5</sub> /PM <sub>10</sub> etc.
<b>HAP</b>	>10/25 tpy	>10/25 tpy		
<b>GHG</b>	-	-	<i>*Triggered only for PSD anyway sources</i>	



## Potential to Emit (PTE)

- ▶ Maximum capacity to emit any given pollutant
- ▶ May be limited by:
  - Physical and operational limits
  - Air pollution control equipment
  - Restricted hours of operation
  - Type or amount of material combusted, stored, or processed
- ▶ Limitations must be federally and practically enforceable in a permit
- ▶ See definition: 40 CFR 52.21(b)(4)

# Emission Calculations

- ▶ Potential-to-emit – means the **maximum capacity** of an emissions unit or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the emissions unit or stationary source to emit an air pollutant, ... including **air pollution control equipment** and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as **part of its design if** the limitation or the effect it would have on emissions is **federally enforceable or legally and practicably enforceable by the state**. Secondary emissions do not count in determining the potential to emit of a stationary source.

[3745-31-01(BBBBB) & 3745-77-01(DD)]

# Enforceable Limitations - How?

## ▶ Two qualifiers

- Operating and/or emission limits in an air permit undergoing public notice
- Appropriate testing, monitoring & recordkeeping to ensure compliance can be demonstrated





# How to Calculate Facility-Wide PTE

- 1) Conduct a facility-wide inventory of emission sources
- 2) Identify any legally enforceable limitations
- 3) Choose emission calculation methodologies
- 4) Gather necessary process data
- 5) Calculate PTE for each emission source
- 6) Calculate total site-wide PTE for the facility

# Questions?



**Bill Bruscano**

**Trinity - Columbus Office**

**(614) 433-0733**

**[bbruscino@trinityconsultants.com](mailto:bbruscino@trinityconsultants.com)**

**Brent Goetz**

**Covestro Hebron Plant**

**(740) 929-8809**

**[Brent.Goetz@covestro.com](mailto:Brent.Goetz@covestro.com)**

**Bob Hodanbosi**

**Chief, Permitting**

**Ohio EPA DAPC**

**(614) 644-3585**

**[Robert.Hodanbosi@epa.ohio.gov](mailto:Robert.Hodanbosi@epa.ohio.gov)**





**Division of Air Pollution Control  
Engineering Guide #80  
Calculating Potential to Emit**

**Question:**

How should PTE be calculated for determining the applicability of De Minimis Status, BAT, Senate Bill 265 BAT Exemption, Title V, Maximum Achievable Control Technology, Prevention of Significant Deterioration and Non-Attainment New Source Review?

**Answer:**

Potential to emit (PTE) is frequently used to determine the applicability of various federal and state rules and regulations. How PTE is calculated can have a direct impact on a regulated entity's compliance obligations, applicable rules, permit application content and type of permit needed. There is no consistent method for calculating PTE that can be applied to all federal and state rules. Instead, the method of calculating PTE is dependent upon the intended purpose. The various methods for calculating PTE are currently specified in rule-based definitions and guidance documents specific to each respective state and/or Federal rule.

This guidance benchmarks methods for determining PTE for various applicability determinations in the state of Ohio. Listed below are methods of calculating PTE along with case specific caveats, Common Questions and Answers, and Appendices to provide additional clarification.

## De Minimis Status

Under OAC rule 3745-15-05, the de minimis definition of PTE reads as follows:

OAC rule 3745-15-05(A)(6) [January 12, 1999]

***"Potential to emit" or "potential emissions" shall mean the amount of emissions of an air contaminant which would be emitted from a source during a twenty-four hour calendar day or calendar year basis, whichever is applicable, if that source were operated without the use of air pollution control equipment unless such control equipment is, aside from air pollution control requirements, necessary for the facility to produce its normal product or is integral to the normal operation of the source. Potential emissions shall be based on maximum rated capacity.***

Keys to this definition of PTE:

- The definition is based on a 24-hour and annual time period. This is because the qualifying criteria in the rule are based on 24-hour and annual emissions.
- Control equipment is not counted unless it is integral to the process.
- The equipment must be considered to operate at its maximum rated capacity.
- State, federal or synthetic minor restrictions are not mentioned in the definition.

Under the de minimus rule three different PTEs must be calculated. These are: (1) the daily (24-hour) PTE of each criteria pollutant or other pollutant, (2) the combined similar source annual PTE of any air contaminant, and (3) annual PTE of any single HAP or combined HAPs. In order to calculate these PTEs, the following steps should be completed.

Step 1: For each air contaminant, determine the maximum amount of emissions from the source during a 24-hour period. This is usually determined using the maximum hourly design capacity to determine the maximum lb/hr emission rate and multiplied by 24 hours/day. Note that for some source types like batch operations, it may not be easy (or possible) to determine an hourly emission rate. In those cases, alternative calculation methods must be used. The below table gives common methods used to calculate the "short term" emission rate needed for this calculation.

Process Type <sup>1</sup>	Max Emissions Rate	Conversion Factor/Method	Initial Result	Daily Conversion (hours/day)	Final Result
Process	lb/hr	None	lb/hr	X 24	lb/day
Incinerator	lb/ton charged	Maximum Ton(s) Charged/hr	lb/hr	X 24	lb/day
Boiler	lb/mmBtu	Maximum mmBtu/hr	lb/hr	X 24	lb/day
Painting <sup>2</sup>	Maximum lb VOC/gallon coating used, as applied; Maximum cleanup lb VOC/gallon used	Maximum coating application rate, gal/hr; Maximum cleanup usage rate gal/day	lb/hr; lb/day	X 24	lb/day (sum coating and cleanup)
Printing <sup>3</sup>	Maximum lb VOC/gallon coating used, as applied; Maximum cleanup lb VOC/gallon used	Maximum coating application rate, gal/hr; Maximum cleanup usage rate gal/day	lb/hr; lb/day	X 24	lb/day (sum coating and cleanup)
Degreaser	Maximum gallons solvent emitted/month	Maximum gallons solvent added – gallons of solvent disposed of per month; divided by number of days in a month <sup>4</sup>	Maximum lb/day	N/A	lb/day
Combustion Turbine	lb/mmBtu	Maximum Btu/hr	lb/hr	X 24	lb/day
Asphalt Plant	lb/ton asphalt produced	Maximum ton asphalt produced/hr	lb/hr	X 24	lb/day
Batch Chemical Process	lb/batch	Batch time (batch/hr)	lb/hr	X 24	lb/day
Baghouse Controlled <sup>5</sup>	lb/DSCF	Maximum DSCF/hr	lb/hr	X 24	lb/day

Step 2: For hazardous air pollutants (HAP), as listed in section 112(b) of the federal Clean Air Act, determine the maximum amount of each individual HAP and combined HAPs which can be emitted during a calendar year. This is usually determined by multiplying the maximum lb/hr emission rate from Step 1 by 8760 hrs/yr and by 1 ton/2000 lbs.

Step 3: For each respective air contaminant, determine the maximum amount that can be emitted from similar sources during a calendar year. This is usually determined by multiplying the maximum lb/hr emission rate from Step 1 by 8760 hrs/yr and by 1 ton/2000 lbs.

<sup>1</sup> Note: This table gives examples for common situations but not all possible situations. Other calculation methods may be valid.

<sup>2</sup> See Engineering Guide 45 for a more detailed discussion concerning PTE for painting lines.

<sup>3</sup> Include Fountain Solution as a “coating” and see Engineering Guide 68 for a more detailed discussion concerning PTE for printing operations.

<sup>4</sup> 30 days can be used as an average number of days per month.

<sup>5</sup> Baghouse must be considered integral to the process.

Caveats:

- De minimis PTE does not include any reduction in emissions from control equipment unless the control device is integral to the normal operation of the source. See Engineering Guide #37 for more information on how Ohio EPA approaches evaluating whether control equipment is considered integrally tied or not.
- Any state or federal rules should not be used to determine the PTE for de minimis purposes. Instead, PTE is based on the capacity of the equipment to emit.

## Best Available Technology (BAT)

For Best Available Technology (BAT) purposes, PTE is used to help establish limits and is used as part of the calculus of cost-effectiveness for add-on controls. The definition of PTE under OAC rule 3745-31-01 reads as follows:

OAC rule 3745-31-01 [December 4, 2007]

**"Potential to emit"** means the maximum capacity of an emissions unit or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the emissions unit or stationary source to emit an air pollutant, which includes any federally regulated air pollutant as defined in paragraph (DD) of rule 3745-77-01 of the Administrative Code, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable or legally and practicably enforceable by the state. Secondary emissions do not count in determining the potential to emit of a stationary source.

Keys to this definition of PTE:

- The time period is not defined so PTE can apply to any time period.
- The physical and operational design maximum capacity is used.
- Secondary emissions (construction or other non-major stationary source emissions) do not count.

Traditionally, Ohio EPA air permits have needed a short term emission limit (lb/hr, lb/ton, lb/batch, etc.) and an annual limit for BAT. This means you are going to have to calculate the PTE on a short term basis and an annual basis<sup>6</sup>. In order to do this, take the following steps:

- Step 1: Determine all applicable State Implementation Plan (SIP) based (17-11, 21-09, etc.) and federal rule based (NSPS, MACT, NESHAP, etc.) emissions limitations for which Ohio has delegated authority.
- Step 2: Determine if any control equipment is going to be used. Determine the capture and control efficiency of the control equipment or the resulting emission rate after controls per step 3 below<sup>7</sup>.
- Step 3: Determine if the controlled short-term maximum emission rate from the air contaminant source is more than or less than any rule based limit found in Step 1. If the controlled short-term maximum emission rate is more than an applicable rule limit, use the rule limit as the short-term PTE. If the controlled short-term maximum emission rate is less than all applicable rule limits, then use the short-term maximum emission rate as the short-term PTE. This step will need to be done for each air contaminant and emissions generating activity.

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<sup>6</sup> Note that S.B. 265 has changed the type of BAT limits included in issued permits.

<sup>7</sup> If control equipment is used, the maximum uncontrolled short term emissions rate should be multiplied by  $[1 - (\text{capture efficiency} \times \text{control efficiency})]$ , where efficiencies are expressed as a decimal fraction, to determine the maximum controlled emission rate then extrapolate the emissions to a maximum annual emissions rate.

Step 4: Determine if there are any federally enforceable or State legally and practicably enforceable limitations that must be used (typical synthetic minor limitations).

Step 5: Using the short term controlled PTE and any restrictions discussed in Step 4, calculate the annual emissions to obtain the annual PTE.

Caveats:

- The use of control equipment needs to be federally enforceable or State legally and practicably enforceable in order to be used as a restriction on PTE.
- Stack and fugitive emissions should be summed for each separate pollutant from each emissions generating activity.



## Senate Bill 265 BAT Exemption

Under Senate Bill (SB) 265, BAT does not apply to sources that have a controlled PTE of less than 10 tons per year. The actual language of the O.R.C. reads as follows:

O.R.C 3704.03(T) [August 3, 2006]

*“...Best available technology requirements shall not apply to an air contaminant source that has the potential to emit, taking into account air pollution controls installed on the source, less than ten tons per year of emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard has been adopted under the federal Clean Air Act...”*

Under this law, the potential to emit must be determined to see if an air contaminant source is exempt from BAT. However, the O.R.C. does not provide a definition of PTE. Since this language was written after the PTE definition found in current Chapter 31, the Chapter 31 definition should be used. Therefore, the definition used for this exemption should be:

OAC rule 3745-31-01 [December 4, 2007]

**"Potential to emit"** means the maximum capacity of an emissions unit or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the emissions unit or stationary source to emit an air pollutant, which includes any federally regulated air pollutant as defined in paragraph (DD) of rule 3745-77-01 of the Administrative Code, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable<sup>4</sup> or legally and practicably enforceable by the state. Secondary emissions do not count in determining the potential to emit of a stationary source.

Since this definition is the same as the definition used in Ohio for BAT, in general, the procedures used for determining PTE for BAT should be followed for determining PTE for this exemption. However, lots of guidance has been issued concerning the 10 ton/yr exemption that should be reviewed before any final decisions have been made. See the *March 2008, BAT Q & A* document, the December 10, 2009 memo concerning *BAT requirements for Permit Applications filed on or After August 3, 2009* and the July 2, 2010 guidance memo concerning *Permit Processing After U.S District Court <10 ton/yr Exemption Decision*. Also note, that because of the ongoing court actions concerning the <10 ton/yr exemption, policies and procedures concerning this exemption may change after this document is issued.

## Title V

The Title V program uses PTE to determine applicability of Title V. The definition of PTE in the Title V rules is as follows:

OAC rule 3745-77-01 [February 3, 2010]

**"Potential to emit"** means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable or legally and practically enforceable by the state. Secondary emissions do not count in determining the potential to emit of a stationary source.

Keys to this definition of PTE:

- The time period is not defined in the definition so PTE can apply to any time period, however Title V thresholds are based on tons per year.
- The physical and operational design maximum capacity is used.
- Secondary emissions (construction emissions or emissions from the operation of the facility that do not come from the stationary source emissions units themselves) do not count.

To determine if a facility qualifies as a “major source” for Title V program applicability, calculate the facility-wide PTE for each criteria pollutant, each individual HAP and combined HAPs. The facility-wide PTE for each criteria pollutant, individual HAP and combined HAPs is determined by summing the potential emissions from every air contaminant source at the facility including de minimis and PTI permanent exempt sources identified in OAC rule 3745-31-03.

- Step 1: Determine all applicable State Implementation Plan (SIP) based (17-11, 21-09, etc.) and federal rule based (NSPS, MACT, NESHAP, etc.) emissions limitations for which Ohio has delegated authority. Since the SIP is considered “federally enforceable” and “legally and practically enforceable,” these limitations are acceptable limitations on the PTE.<sup>8</sup> Once the limit is determined, then extrapolate the emissions to a maximum annual rate.
- Step 2: Identify the maximum uncontrolled potential short term emissions rate (i.e. lbs/hr, lbs/batch, etc.) based on the maximum hourly design capacity of the equipment then extrapolate the emissions to a maximum annual emissions rate. This is usually determined by multiplying the maximum uncontrolled lb/hr emissions rate by 24 hrs/day and 365 days/yr. Inherent physical limitations that prevent direct extrapolation of the maximum short term emissions rate to a maximum annual rate based on continuous operation may be considered in accordance with applicable state and federal guidance (e.g., a batch process where the PTE is calculated on a per-batch basis and only “x” number of batches can physically be processed per day).
- Step 3: Identify all “federally enforceable or state legally and practically enforceable” limitations specified in effective installation or operation permits issued to the facility. Traditionally,

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<sup>8</sup> See footnote #2.

these limitations have been issued in a Synthetic Minor PTI, Federally Enforceable State Operating Permit (FESOP) or Federally Enforceable State Permit-to-Install and Operate (FEPTIO) that was issued Draft, then Final.

Caveats:

- BAT based emissions limitations, BAT based operational restrictions, requirements to use control equipment, operational parameters including control efficiency and capture efficiency, and voluntary restrictions identified in issued permits are not limitations on PTE unless they can be considered “*federally enforceable or legally and practically enforceable by the state*” and were issued Draft, then Final<sup>9</sup>. See Q&A #7 for further discussion.
- Engineering Guide #61 recognizes actual emissions of less than 20% of the criteria pollutant major source thresholds as a “Presumed Inherent Physical Limitation”. If a source qualifies for this exemption and has emissions records or other appropriate documentation to demonstrate actual criteria pollutant emissions at or below the thresholds, then the Title V regulations may not apply.
- Uncontrolled potential fugitive emissions must be included in calculating the facility-wide potential to emit if any of the following apply:
  - The facility is one of the listed source categories identified in OAC rule 3745-77-01(X)(2); or,
  - Any individual source/emissions unit that is regulated under section 111 or 112 of the Clean Air Act pursuant to standards established prior to August 7, 1980 that is not already identified in OAC rule 3745-77-01(X)(2)(a) through (z).
- The facility-wide potential to emit should include all air contaminant sources at the facility including, but not limited to, de minimis and exempt sources identified in OAC rule 3745-31-03. Be aware, that de minimis and exempt sources may already be listed in the Stars2 Facility Profile. However, there is no requirement to add new de minimis or exempt sources and no additional details need to be provided for existing sources unless they are permanently shut down. Therefore, including these sources in a PTE analysis will necessitate additional communication with the regulated entity.

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<sup>9</sup> Note that there are some legal arguments that say a direct-final installation permit can be considered federally enforceable such that it can be used to limit the PTE. This argument is based on the fact that Ohio’s NSR permit program is an approved part of the State Implementation Plan (SIP) that is federally enforceable. If a permittee has a permit that was issued direct-final and wants to use some limitation in the permit to limit PTE, then discuss this issue with your Central Office permit contact.

## Maximum Achievable Control Technology (MACT)

Under the Maximum Achievable Control Technology (MACT) program, PTE is used to determine the applicability of the rule. The definition used is as follows:

MACT (40 CFR 63.2) [October 29, 2010]

*Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.*

Keys to this definition of PTE;

- The time period is not defined but for MACT applicability you are always looking at annual emissions.
- The physical and operational design maximum capacity is used.

To determine if a facility qualifies as a “major source” for MACT program applicability, calculate the facility-wide PTE for each individual HAP and for all HAPs combined. The facility-wide PTE for each individual and combined HAPs is determined by summing the potential emissions from each air contaminant source at the facility

Steps: Use Steps 1-3 as seen under the Title V section, unless otherwise specified in Caveats below.

### Caveats:

- PTE is calculated after proposed control equipment, assuming the equipment will be required in a “federally enforceable” and state legally and practically enforceable permit issued Draft, then Final. Note that if the MACT requires the use of the control equipment, then the control equipment requirement is federally enforceable on its own.
- The facility-wide potential to emit for HAPs should include all air contaminant sources at the facility including, but not limited to, de minimis and exempt sources identified in OAC rule 3745-31-03.
- When assessing MACT applicability be aware of USEPA’s “Once in Always In” policy.
- Fugitive emissions from all air contaminant sources are included towards the facility-wide PTE.
- Engineering Guide #61, regarding presumed inherent physical limitations, does not apply to MACT applicability.
- Some MACT rules apply to area sources (i.e., non-major sources where the potential to emit HAPs is less than the major source thresholds).

## Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NNSR)

There are three PTE definitions when it comes to evaluating major NSR. The first one below comes from the federal Prevention of Significant Deterioration (PSD) rules, the second comes from the federal non-attainment New Source Review (NNSR) rules, and the third one comes from the state of Ohio's New Source Review rules.

PSD (40 CFR 52.21(b)(4) [October 29, 2010]

**Potential to emit** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

and,

Nonattainment NSR (40 CFR 51, Appendix S) [October 29, 2010]

**Potential to emit** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

and,

OAC rule 3745-77-01 [February 3, 2010]

**"Potential to emit"** means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable or legally and practicably enforceable by the state. Secondary emissions do not count in determining the potential to emit of a stationary source.

The PSD and NNSR PTE definitions are essentially the same with one word difference: an "only" has been added into the second to last sentence in the NNSR definition. The Ohio definition is different in a number of ways including: (1) "pollutant" is changed to "air pollutant", (2) "source" has been changed to "emissions unit or stationary source", and (3) "legally and practicably enforceable by the state" has been included in the second to last sentence.

To determine if a facility is a "Major Stationary Source" for the purpose of PSD/NNSR applicability, calculate the facility-wide PTE for each regulated NSR pollutant. The facility-wide PTE for each

regulated NSR pollutant is determined by summing the PTE from each air contaminant source at the facility, including de minimis and exempt sources.

To determine if an installation or modification is considered a “Major Modification” for the purpose of PSD/NNSR applicability, calculate all emissions associated with the installation and/or modification in accordance with applicable state and federal guidance.

PSD requirements only apply to pollutants designated as attainment for a given area and NNSR requirements only apply to the non-attainment pollutant(s) of concern and associated precursors.

Steps: Use Steps 1-3 as seen under the Title V section, unless otherwise specified in Caveats below.

Caveats:

- Reductions in PTE due to control equipment should be used if the permit limitations are considered “federally enforceable” and state “legally and practically enforceable”. (See Q&A #7) SB 265 based BAT still needs to meet this criteria to effectively limit PTE. The permit does need to be issued Draft for the limitations to be recognized as effective limitations on PTE<sup>10</sup>.
- Uncontrolled potential fugitive emissions must be included in calculating the facility-wide potential to emit if any of the following apply:
  - The facility is one of the listed source categories identified in OAC rule 3745-77-01(X)(2); or,
  - Any individual source/emissions unit that is regulated under section 111 or 112 of the Clean Air Act pursuant to standards established prior to August 7, 1980 that is not already identified in OAC rule 3745-77-01(X)(2)(a) through (z).
- Fugitive emissions from all sources should be included when determining whether a “major modification” has occurred. (as a result of the stay of the Fugitives Rule)
- Determining whether a modification meets the definition of “Major modification” should be performed in accordance with its definition and the definition for “net emissions increase”, both specified in OAC rule 3745-31-01.
- Total particulate emissions are considered a regulated NSR pollutant.

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<sup>10</sup> See footnote #9.

## Common Questions and Answers

**Question 1:** When calculating de minimis, is a lockout device used to prevent operation of the source without the control device operating considered “integral to operation of the source”?

*Yes, a controlled emission rate at maximum capacity can be used to calculate PTE if the control is integrally tied (e.g., through a kill switch that stops the process if the control stops working). See Engineering Guide #37 for more information on how Ohio EPA approaches evaluating whether control equipment is considered integrally tied or not.*

**Question 2:** Does area source MACT/GACT applicability affect de minimis (OAC rule 3745-15-05) determinations?

*No, area source MACT/GACT applicability does not affect de minimis determinations. Any de minimis determinations should be done without considering area source MACT/GACT applicability. When determining the applicability of Chapter 3704 of the ORC, OAC rule 3745-15-05 specifically does not allow any requirement to be taken into consideration that is established under the CAA (for example, MACT standards) that would result in an emission limitation of less than 10 pounds per day or an operational restriction equivalent to an emission limitation of less than 10 pounds per day. If you determine that the source is de minimis, then no further action is required on your part. The source is de minimis and it does not need a permit. Therefore, it does not need any area source MACT/GACT referencing because there is no permit. If it is determined that the affected source is not de minimis, then it needs a permit and the standard language for the area source MACT/GACT should be included as described earlier. This means that a permit should not be required solely because of area source MACT/GACT applicability.*

**Question 3:** Should fugitive PM10 emissions at a hot mix asphalt plant be counted towards PTE to determine Title V applicability?

*An April 14, 1998 USEPA memorandum titled "Potential to Emit (PTE) Guidance for Specific Source Categories" explains how to calculate the PTE for PM10 from an asphalt plant and it reads as follows:*

*"In addressing particulate emissions, both stack and fugitive emissions must be addressed. The New Source Performance Standard (NSPS) for hot mix asphalt plants, codified in subpart I of 40 CFR Part 60 was promulgated during the 1970s. For major source identification purposes, fugitive emissions must be addressed for any "... stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act..." It should be noted that for such stationary source categories, fugitive emissions must be calculated for any source in the category, and not just those subject to the NSPS."*

*The example in the memo brought out clarity to two items that are confusing. First, if a stationary source category is regulated by section 111 and 112 as of August 7, 1980, then fugitive emissions from that stationary source category are counted towards PTE even if the specific source or emissions unit is not subject to the NSPS or NESHAP category. U.S. EPA views the listed categories very broadly, not restricted to just the sources that are regulated under the NSPS/NESHAPs. Second, the fugitives that count towards PTE are all fugitives from the source not just those that are addressed by the regulation. For example an asphalt plant would include roadways fugitive emissions towards Title V applicability even though roadways are not an affected source under the NSPS.*

**Question 4:** Can "bottlenecks" in productions, physical limitations, or seasonal operation be considered when calculating the potential to emit?

*Generally, a facility cannot consider these types of limitations unless they establish federally enforceable conditions in a State permit. However, potential to emit under certain circumstances can be bizarre. A strict interpretation can have extremely small air emitting facilities subject to the program. Therefore, common sense needs to be used. If a company actually emits very small quantities of emissions (less than 20 tons for any regulated non-HAP pollutant or less than a 2 tons for any HAP, or less than 5 tons for all HAP's collectively), then Ohio EPA considers the facility a minor that does not require a Title V permit or a PTO with federally enforceable conditions (synthetic minor).*

*See Engineering Guide #61 for more information.*

**Question 5:** Can a product collector that meets the requirements of Engineering Guide #37 be used as a limitation on PTE for De Minimis Status, BAT, SB 265 BAT Exemption, MACT, Title V, and PSD/NNSR?

Yes.

**Question 6:** How are individual and combined HAPs calculated when a coating line uses numerous coatings with different percentages for various HAPs?

*Determining PTE for individual and combined HAPs are done in a similar fashion as criteria pollutants except that each HAP will need to be done individually. Typically, the approach is to determine the operation mode that results in the highest emission of each individual HAP or in the highest emission of all HAPs combined. Based on that operation mode you would calculate the maximum individual HAP emission rate and the maximum combined HAP emission rate, typically on an hourly basis. Then annual emissions are calculated assuming the source operates 24 hours per day and 365 days per week. Of course, federally enforceable or State legally and practically enforceable limitations can be taken into account. For coating lines, this is done very similarly to VOC PTE calculations. See Engineering Guide #45 for more information.*

**Question 7:** How do limitations/restrictions become "federally enforceable or legally and practicably enforceable by the state"? What are their characteristics such that PTE is effectively limited in a permit which allows the source/facility to avoid an applicable rule or program?

*Permits known as Synthetic Minor PTIs, Federally Enforceable State Operating Permits (FESOP), or Federally Enforceable Permits-to-Install and Operate (FEPTIO) have been used in Ohio as the permitting mechanisms to institute limitations on PTE to avoid the applicability of specific state and/or Federal rules.*

*USEPA's Guidance Memorandum of January 25, 1995, (Seitz Memorandum) states that to limit a source's emissions for avoidance of Title V and section 112 of the CAA the limits must be both "federally enforceable" and "enforceable as a practical matter."*

*To be a "federally enforceable" limitation on PTE, USEPA must have a right to enforce the limitations. USEPA has determined that these limitations need to be issued in a permit that is issued as a Draft*



action with a 30-day comment period, then as a Final action<sup>11</sup>. This issuance process provides both the public and USEPA an opportunity to comment on the permit.

The second criterion mentioned in the Seitz Memo specifies that the limitations need to be “enforceable as a practical matter”. USEPA’s Final rule, December 31, 2002, 11-12, 67FR 80186-01, states that “‘Enforceable as a practical matter’ will be achieved if a requirement is both legally and practically enforceable.” In 2006 “enforceable as a practical matter” was defined as follows:

40 CFR 49.152 [Proposed August 21, 2006]

“Enforceable as a practical matter means that an emission limitation is both legally and practically enforceable as follows:

- (1) An emission limitation is “legally enforceable” if the reviewing authority has the right to enforce it.
- (2) Practical enforceability for an emission limitation in a permit for a source is achieved if the permit’s provisions specify:
  - (i) A limitation and the emissions unit(s) at the source subject to the limitation;
  - (ii) The time period for the limitation (e.g., hourly, daily, monthly, and/or annual limits such as rolling annual limits); and
  - (iii) The method to determine compliance, including appropriate monitoring, recordkeeping, reporting, and testing.
- (3) For rules and general permits that apply to categories of sources, practicable enforceability additionally requires that the provisions:
  - (i) Identify the types or categories of sources that are covered by the rule or general permit;
  - (ii) Where coverage is optional, provide for notice to the reviewing authority of the source’s election to be covered by the rule or general permit; and
  - (iii) Specify the enforcement consequences relevant to the rule or general permit.”

This definition is how Ohio implements the “legally and practicably enforceable” aspect of the ORC and OAC’s “potential to emit” definition.

In addition to the above criteria, U.S.EPA’s “Guidance on Limiting Potential to Emit in New Source Permitting” John Seitz, USEPA (June 13, 1989) explained the need for permit restrictions on production that supports federally enforceable emissions restrictions. The need for permit restrictions was based upon Judge Alfred Arraj’s decision in *United States v. Louisiana-Pacific Corporation*, 682 F. Supp. 1122 (D. Colo. Oct. 30, 1987) and 682 F. Supp. 1141 (D. Colo. March 22, 1988). These operational restrictions can include hours of operation, number or units produced, amount of material processed, etc.

In Ohio permits, to be “federally enforceable or legally and practicably enforceable by the state” the limitation/restriction needs to be written such that the following specific criteria are met:

- The permit needs to have been issued as a Draft action with a 30-day comment period, followed by Final issuance. The applicable emissions unit(s) and limitation(s) need to be specified.
- The permit needs to include a “short term<sup>12</sup>” emissions limitation (i.e., lb/hr, lb/day, tons/rolling 12-month period). Ton per year is not an acceptable short term limitation.

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<sup>11</sup> See footnote #9.

- *The emissions limitation(s) should be accompanied by operational restriction(s) that support the specified emissions limitation(s).*
- *Sufficient monitoring, recordkeeping, reporting and testing should be included to assure compliance with the emissions and operational limitation(s).*
- *Preferably the limitations on PTE are cited using a rule beyond BAT.*
- *The appropriate Draft/Final issuance process is discussed within each respective PTE method.*

**Question 8:** If a permit (new or old) was issued that does not meet the criteria specified in Question 7 above how should PTE be calculated?

*These situations should be brought to the attention of the respective permit supervisor and Central Office NSR contact.*

**Question 9:** If a State or federal rule-based restriction/limitation is not cited in a permit as an applicable requirement, should the rule-based restriction/limitation still be considered when calculating PTE?

*In most cases, the answer is yes. However, there may be some rules that do not practically restrict emissions. These should not be used when calculating PTE. For instance, a MACT rule may have some operating practice requirements that cannot be related to emissions. Under that scenario, the MACT rule cannot be used to restrict PTE.*

**Question 10:** How should “potential to emit” in accordance with OAC Chapter 3745-21 be calculated?

*PTE is defined in multiple sections of OAC Chapter 3745-21 and should be calculated consistent with the description of Title V PTE, with the exception of OAC Chapter 3745-21-12. OAC Chapter rule 3745-21-12 defines “uncontrolled PTE” and includes specific calculations.*

**Question 11:** Can an emissions unit that is considered de minimis because the facility maintains records per OAC 3745-15-05(D) to demonstrate it emits less than one ton of HAPs per year, consider the one ton limitation as federally enforceable as part of an approved SIP? Can the limitation be used to avoid a MACT even if the PTE based on the capacity of the emissions unit is greater than 10 tons per year of a single HAP?

*Yes to both questions, if the emissions unit has always maintained the appropriate records per OAC rule 3745-15-05(E) to demonstrate that it has emitted less than one ton of a HAP. Because the de minimis rule is an approved part of the SIP, the limitations can be considered a federally enforceable limitation on potential to emit.*

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<sup>12</sup> For the purpose of limiting potential to emit here, U.S. EPA calls a rolling 12-month limit a “short term” limit. However, a rolling 12-month limit is not an acceptable “short term” limit for the purposes of establishing short term BAT, BACT or LAER limits.

**Question 12:** If emissions of pollutant A are restricted due to a Synthetic Minor restriction/limitation on pollutant B can the reduction on pollutant A be considered a Synthetic Minor restriction/limitation? For example a Synthetic Minor limitation requires use of a baghouse to limit PM-10, however Lead is also controlled. Can the baghouse be used as a reduction in PTE for Lead?

*In some cases the answer is yes, in some cases the answer is no. If the criteria specified in Question 7 are not met, then the restriction/limitation is not considered a Synthetic Minor limit. In the example, we can assume that the permit does not explicitly limit Lead emissions in an appropriate manner.*

*However, if the restriction of pollutant B meets all of the tests in Question 7, and, in effect, it also causes all of the Question 7 tests to be met for pollutant A, then it is possible that the restriction on pollutant B also results in a Synthetic Minor restriction/limitation on pollutant A.*

*These situations should be brought to the attention of the respective permit supervisor and Central Office NSR contact.*

**Question 13:** Should limitations and/or requirements implemented using “voluntary limits on allowable emissions,” per OAC rule 3745-31-05(E) or (F) be considered “federally enforceable” and/or “legally and practically enforceable”?

*Voluntary restrictions can be used to limit the PTE if they meet all of the typical requirements to make them federally enforceable or legally and practically enforceable. If they did not meet all of the typical requirements, then you could not use them to limit PTE. For instance, if a company volunteered to install a control device to control odors but we did not require it to be used in the permit and we did not have appropriate emission limits, operational restrictions, monitoring, recordkeeping, reporting and testing requirements, then, no the control device could not be used to limit PTE.*

## **Biographical Information**

**Robert F. Hodanbosi, Chief, Division of Air Pollution Control, Ohio EPA**  
**Lazarus Government Center, 50 West Town Street, Suite 700, Columbus, Ohio 43215**  
**(614) 644-3585 Fax: (614) 644-3681**  
[bob.hodanbosi@epa.ohio.gov](mailto:bob.hodanbosi@epa.ohio.gov)

Bob Hodanbosi became chief of the Division of Air Pollution Control (DAPC), Ohio Environmental Protection Agency (Ohio EPA) in September 1992. His current duties include being responsible for the air pollution control program for the state of Ohio and development of the programs needed to comply with the Clean Air Act Amendments. In 2004, Bob was selected to represent state permitting authorities on the Title V Permit Performance Task Force that was formed by the U.S. EPA's Clean Air Act Advisory Committee (CAAAC). Bob has also had the opportunity to testify at U.S. House and Senate committees on Clean Air Act impacts on facilities in Ohio. From May 1987 to September 1992, his position was assistant chief of DAPC and manager of the Air Quality Modeling and Planning Section, DAPC, Ohio EPA. From April 1978 to May 1987, as manager of the Air Quality Modeling and Planning Section, his main duties included: development of the technical support for air pollution control regulations for criteria air pollutants; atmospheric dispersion modeling; air quality designations under Section 107 of the Clean Air Act; development of new source review procedures; Since the 1980's, Bob has represented Ohio EPA on the Ohio Coal Development Office, Technical Advisory Committee. From January 1977 to April 1978, his position was supervisor of the Environmental Assessment Unit, DAPC, Ohio EPA. The main responsibilities of this position involved the supervising of all air quality evaluation and atmospheric dispersion modeling activities for DAPC. From June 1973 to December 1976, he held a position in the Northeast District Office/Engineering Services Section, DAPC, Ohio EPA. The main function of this position involved the engineering review of air pollution permit applications. Bob has lectured extensively on topics relating to the requirements under the Clean Air Act and the controls needed to meet air quality standards. Finally, Bob is a current member of CAAAC through August of 2021.

### **PROFESSIONAL ASSOCIATIONS**

Mr. Hodanbosi is a member of the American Institute of Chemical Engineers and Air & Waste Management Association and is registered as a Professional Engineer in the states of Ohio and West Virginia. Bob is current President of the Association of Air Pollution Control Agencies.

### **EDUCATIONAL BACKGROUND**

Mr. Hodanbosi received his Master's of Science degree in Chemical Engineering at the Cleveland State University in 1977, and a Bachelor in Chemical Engineering at the Cleveland State University in 1973. In addition, he completed post-graduate courses in fluid mechanics and turbulence at The Ohio State University, 1978 to 1982.

## Biographical Information

**Brent Goetz, Principal Environmental Specialist, Covestro LLC**  
**BE Engineered Plastics HSEQ, Newark, Ohio**  
**(740) 929-8809      Brent.goetz@covestro.com**

Brent Goetz has been with Covestro, LLC since 2019, where he serves as the Principal Environmental Specialist at the Newark Compounding facility, which manufactures engineered plastic resins. Mr. Goetz is responsible for all aspects of environmental compliance including maintaining the synthetic minor air permit. Additionally, Mr. Goetz leads Operation Clean Sweep, a campaign focused on helping industry achieve zero plastic resin loss, for all of Covestro, LLC. Mr. Goetz earned his Bachelor's degree in Environmental Science from the University of Toledo. He is a Registered Environmental Health Specialist in the State of Ohio and an Institute for Sustainable Infrastructure, Envision Sustainability Professional.

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**William J. Bruscano, P.E., Regional Manager of Consulting Services (OH, WV, KY)**  
**Trinity Consultants, 110 Polaris Parkway, Suite 200, Westerville, Ohio 43082**  
**Phone: 614.433.0733      bbruscano@trinityconsultants.com**

Mr. Bruscano is a Principal Consultant, a licensed Professional Engineer in the State of Ohio, and the Manager of Trinity's Columbus, Ohio office. Mr. Bruscano has extensive experience assisting industrial clients with regulatory challenges, such as Title V permitting, Prevention of Significant Deterioration (PSD) permitting, minor source and synthetic minor permitting, National Pollutant Discharge Elimination System (NPDES) permitting, Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) plan development, as well as 3<sup>rd</sup> party compliance audits covering air, water, and waste regulations. He enjoys his mentoring/managing role with the growing Trinity Columbus team and managing the strategic elements of Trinity's business, helping Ohio facilities navigate environmental requirements while obtaining the operational flexibility needed to meet their production needs.

Mr. Bruscano is also one of Trinity's skilled instructors teaching our semi-annual *Environmental Reporting Requirements in Ohio* course, our national *Intro to Clean Water Act* course, and a variety of custom courses. He is a member of the Air & Waste Management Association and Ohio Chemistry Technology Council. Mr. Bruscano graduated from the University of Cincinnati with a Bachelor's degree in Chemical Engineering in 2005 and has been serving as the Columbus office manager since 2012.