



**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 minimis 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 ¹	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 ²	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 ³	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 ⁴	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 ⁵	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.

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

² See Engineering Guide 45 for a more detailed discussion concerning PTE for painting lines.

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

⁴ 30 days can be used as an average number of days per month.

⁵ 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 basis⁶. 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 below⁷.
- 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.

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

⁷ 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 enforceable⁴ 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.⁸ 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,

⁸ 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 Final⁹. 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.

⁹ 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 PTE¹⁰.
- 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.

¹⁰ 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 action¹¹. 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 term¹²” emissions limitation (i.e., lb/hr, lb/day, tons/rolling 12-month period). Ton per year is not an acceptable short term limitation.

¹¹ 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.

¹² 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.