

Engineering Guide #87: Guidance Concerning Rule Citations for the <10 tons/yr BAT Exemption

THIS GUIDE DOES NOT HAVE THE FORCE OF LAW

Question:

It is my understanding that U.S. EPA approved the June 30, 2008 version of rule 3745-31-05 with the exception of the paragraph allowing the <10 tons/yr BAT exemption (3745-31-05(A)(3)(a)(ii)). See the February 20, 2013 FR at page 11748 attached. Does this approval change the rule cites we use for the various <10 tons/yr BAT exemption scenarios? Do the terms and conditions used for <10 ton sources also change?

Answer:

On February 20, 2013, U.S. EPA approved multiple portions of Ohio Administrative Code (OAC) Chapter 31 as effective June 30, 2008 into Ohio's State Implementation Plan (SIP). As part of this approval, U.S. EPA approved most of OAC rule 3745-31-05. U.S. EPA chose not to approve the <10 tons/yr BAT exemption at the time they approved the rest of the rule.

As a result of this approval, the rule cites within the June 30, 2008 version of 31-05 are now federally enforceable except for the <10 tons/yr exemption. Because this rule is now approved, we no longer need to cite the December 1st, 2006 nor the November 30, 2001 versions of the rule (November 30, 2001 was the previously SIP-approved version) for the <10 tons/yr sources in permits. Instead, we are going to use the June 30, 2008 rule cite date.

Question:

When should the above rule citation approach be used?

Answer:

The above rule citation approach should be used for any qualifying new or modified source installed or modified on or after February 20, 2013¹.

¹ Note that this guidance change the rule cite date and the "dual BAT" language but does not change the BAT format guidance described in various SB 265 guidance documents.

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The above rule citation approach can also be used when renewing or modifying a qualifying new or modified source that was installed or modified on or after February 20, 2013. In the case of Title V, the Title V renewal or modification permit can contain the above citation approach without changing the previous approach found in the initial permit-to-install (PTI).

Question:

Can DAPC show some examples of how the rule cites should look?

Answer:

In order to help permit writers understand how permits should be written for <10 tons/yr sources in relation to the 31-05 rule, we have developed revised terms and conditions. Examples of each of the <10 tons/yr scenarios are described below. In each of the below examples, the rule cites refer to the June 30, 2008 version of the rule.

Natural Minor Scenario: The permittee has a gas-fired boiler rated at 350.0 mmBtu/hr. It was installed August 1, 2014 (after August 3, 2009²). You calculate the particulate emissions assuming the boiler ran at its maximum heat rate for 8760 hours per year. Based on your calculation, the boiler has a PTE of 8.3 tons PM2.5/yr. Therefore, the emissions unit has an uncontrolled potential to emit of less than 10 tons/yr for PM2.5. For PM2.5, the permit *Applicable Emissions Limitations and/or Control Requirements* table should be set up as follows:

	<i>Applicable Rules/Requirements</i>	<i>Applicable Emissions Limitations/Control Measures</i>
a.	<i>OAC Rule 3745-31-05(A)(3) June 30, 2008</i>	<i>Install a burner designed to meet 0.0X lb. PM2.5/mmBtu heat input. See b)(2)a. below.</i>
b.	<i>OAC Rule 3745-31-05(A)(3)(a)(ii) June 30, 2008</i>	<i>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM2.5 emissions from this air contaminant source since the potential to emit is less than 10 tons/year. See b)(2)b. below.</i>

(2) Additional Terms and Conditions

- a. *This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).*

² For sources installed or modified after August 3, 2009, BAT shall be described using the SB 265 approach, as described in the February 7, 2014 Hopkins memo.

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[OAC rule 3745-31-05(A)(3)]

- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

Comment: Note that until U.S. EPA approves the <10 tons/yr exemption, the 31-05(A)(3)(a)(ii) rule cite is State-only enforceable.

Federally Enforceable Synthetic Minor Scenario: The permittee has a gas-fired boiler rated at 552.0 mmBtu/hr. It was installed August 1, 2014 (after August 3, 2009, so, the February 7, 2014 BAT guidance applies). You calculate the particulate emissions assuming the boiler ran at its maximum heat rate for 8760 hours per year. Based on your calculation, the boiler has a PTE of 13.0 tons PM2.5/yr. Therefore, the emissions unit has an uncontrolled potential to emit of more than 10 tons/yr for PM2.5. The emissions unit has a potential to emit greater than 10 tons per year but agrees to a synthetic minor limitation to avoid NSR or TV. The synthetic minor restriction in effect restricts the boiler to operating no more than 4000 hours per year. This results in a restricted PTE of 6.8 tons PM2.5 per year. Therefore, the synthetic minor limitation also restricts the emissions unit to below 10 tons per year. For PM2.5, the permit *Applicable Emissions Limitations and/or Control Requirements* table should be set up as follows:

	<i>Applicable Rules/Requirements</i>	<i>Applicable Emissions Limitations/Control Measures</i>
a.	<i>OAC rule 3745-31-05(A)(3) June 30, 2008</i>	<i>Install a burner designed to meet 0.0X lb. PM2.5/mmBtu heat input. See b)(2)a. below.</i>
b.	<i>OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008</i>	<i>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM2.5 emissions from this air contaminant source since the potential to emit is less than 10 tons/year taking into account the federally enforceable restriction in b)(1)c. below. See b)(2)b. below.</i>
c.	<i>OAC rule 3745-31-05(D) June 30, 2008</i>	<i>0.0X lb. PM2.5/mmBtu 6.8 tons of PM2.5 per rolling 12-month period 4000 hours of operation per rolling 12-month period</i>

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(2) Additional Terms and Conditions

- a. *This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).*

[OAC rule 3745-31-05(A)(3)]

- b. *These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.*

[OAC rule 3745-31-05(A)(3)(a)(ii)]

Comment: 05(D) would be used when the permittee is agreeing to a synthetic minor type restriction to avoid major NSR or avoid Title V and the impact that restriction has also restricts the emissions unit to less than 10 ton/yr.

The 31-05(A)(3) and 31-05(D) rule cites are federally enforceable. The 31-05(A)(3)(a)(ii) rule cite is state-only enforceable.

State-Only Restriction to Avoid BAT Scenario: The permittee has a gas-fired boiler rated at 552.0 mmBtu/hr. It was installed August 1, 2014 (after August 3, 2009, so, the February 7, 2014 BAT guidance applies). You calculate the particulate emissions assuming the boiler ran at its maximum heat rate for 8760 hours per year. Based on your calculation, the boiler has a PTE of 13.0 tons PM2.5/yr. Therefore, the emissions unit has an uncontrolled potential to emit of more than 10 tons/yr for PM2.5. However, the company agrees to restrict the operation to only November through February. This results in a limited PTE of 5.0 tons PM2.5 per year. For PM2.5, the permit *Applicable Emissions Limitations and/or Control Requirements* table should be set up as follows:

	<i>Applicable Rules/Requirements</i>	<i>Applicable Emissions Limitations/Control Measures</i>
a.	<i>OAC rule 3745-31-05(A)(3) June 30, 2008</i>	<i>Install a burner designed to meet 0.0X lb. PM2.5/mmBtu heat input. See b)(2)a. below.</i>
b.	<i>OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008</i>	<i>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM2.5 from this air contaminant source since the calculated annual emission rate is less than 10 tons/yr taking into account the voluntary restriction from OAC rule 3745-31-05(E). See b)(2)b. below.</i>
c.	<i>OAC rule 3745-31-05(E) June 30, 2008</i>	<i>Emissions shall not exceed 5.0 tons of PM2.5 per year</i>

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		<i>Operate the boiler only during the months of November through February.</i>
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(2) Additional Terms and Conditions

- a. *This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).*

[OAC rule 3745-31-05(A)(3)]

- b. *These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.*

[OAC rule 3745-31-05(A)(3)(a)(ii)]

Comment: 05(E) would be used when the permittee is agreeing to a non-synthetic minor type restriction to avoid BAT (in this case, the operational limitation of only operating from November through February). This type of restriction would not need to follow all criteria U.S. EPA demands to make something federally enforceable (like a 30-day comment period, rolling process variable, etc.) but it would need to be practically enforceable by the state and include appropriate monitoring, record keeping, and reporting to support the restriction.

The 31-05(A)(3) and 31-05(E) rule cites are federally enforceable. The 31-05(A)(3)(a)(ii) rule cite is state-only enforceable. Note that although the 31-05(E) rule itself is federally enforceable because U.S. EPA approved it as part of the SIP, the terms and conditions established under the rule are state-only enforceable. This is because the rule requires the terms and conditions to be state-only enforceable. Also, since the terms and conditions are state-only enforceable, the terms and conditions established by 31-05(E) should be listed as state-only enforceable under paragraph C.1.a)(1) in the emissions unit terms (i.e., term b)(1)c. in this example). In addition, 31-05(A)(3)(a)(ii) terms should be listed as state-only enforceable under paragraph C.1.a)(1), namely b)(1)b. and b)(2)b. in this example.

Federal Rule Restriction Scenario: The permittee has a paint booth that paints metal parts. The paint booth has no VOC control system and the parts are air dried. It was installed August 1, 2014 (after August 3, 2009). You calculate the VOC emissions assuming the paint booth operated at its maximum rate for 8760 hours per year and a VOC content of 6.0 lbs. VOC/gallon (an assumed maximum). Based on your calculation, the paint booth has a PTE of 13.0 tons VOC/yr. Therefore, the emissions unit has an uncontrolled potential to emit of more than 10 tons/yr for VOC. However, you discover that OAC rule 3745-21-09(U) restricts the VOC content to 3.5 lbs. VOC/gallon. When you do the calculation with the 21-09(U) limit, you find the annual emissions are less than 7.6 tons VOC/yr. This is less than the 10 ton/yr

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BAT exemption threshold. For VOC, the permit *Applicable Emissions Limitations and/or Control Requirements* table should be set up as follows:

	<i>Applicable Rules/Requirements</i>	<i>Applicable Emissions Limitations/Control Measures</i>
a.	<i>OAC rule 3745-31-05(A)(3) June 30, 2008</i>	<i>0.63 tons of VOC per month on a rolling 12-month period. See b)(2)a. below.</i>
b.	<i>OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008</i>	<i>The Best Available Technology (BAT) requirements under 3745-31-05(A)(3) do not apply to VOC since the calculated annual emission rate is less than 10 tons/yr taking into account the federally enforceable rule limit of 3.5 lbs./gallon of coating, excluding water and exempt solvents limitation in OAC rule 3745-21-09(U). See b)(2)b. below.</i>
c.	<i>OAC rule 3745-21-09(U)</i>	<i>3.5 lbs. VOC/gallon of coating, excluding water and exempt solvents</i>

(2) *Additional Terms and Conditions*

- a. *This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).*

[OAC rule 3745-31-05(A)(3)]

- b. *These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.*

[OAC rule 3745-31-05(A)(3)(a)(ii)]

Comment: The 31-05(A)(3) rule cite is federally enforceable. The 31-05(A)(3)(a)(ii) rule cite is state-only enforceable.

Key Words: *Citation, cite, BAT, Best Available Technology, Voluntary, State-only, Synthetic Minor, NSR, TV*

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