

**SB 265 PSD Examples:**

1. **EXAMPLE CHANGES:** No BAT or PSD for some pollutants (<10TPY), for others PSD applies and BAT is equivalent (>10 TPY).
2. **EXAMPLE T&Cs:** PSD limitations >10 TPY. BAT is equivalent (uncontrolled)
3. **EXAMPLE T&Cs:** PTE is restricted to avoid PSD and BAT.
4. **EXAMPLE T&Cs:** PSD limitations reduce the emissions <10 TPY. BAT is equivalent (controlled).
5. **EXAMPLE T&Cs:** BAT, but not PSD, applies to 1 criteria pollutant and 1 air toxic. PSD applies to the other criteria pollutants, BAT is equivalent.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

1. **EXAMPLE CHANGES:** No BAT or PSD for some pollutants (<10TPY), for others PSD applies and BAT is equivalent (>10 TPY). Note: CO and VOC limitations were removed to simplify this example only.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B001 - 25 mmBtu/hr natural gas boiler for the VOD system equipped with a low NOx burner	OAC rule 3745-31-05(A)(3)(b) OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.01 lb/hr and 0.06 ton/year.  See Section A.I.2.d below.  (Note to permit writers: the project PM-10 and SO <sub>2</sub> did not trip PSD/NSR and are <10TPY).
	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru 20 for NO <sub>x</sub> , 3745-18-06(A) and OAC rule 3745-17-07(A)(1) [Note to permit writers: BAT applies only to NO <sub>x</sub> .]
	OAC rule 3745-31-10 thru 20	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 2.45 lbs/hr and 10.7 tons/year.

	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	See Section A.2.c. below.
OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to <del>OAC rule 3745-31-05(A)(3)</del> OAC rule 3745-31-10 thru 20.
OAC rule 3745-18-06(A)	Exempt pursuant to OAC rule 3745-18-06(A) when burning natural gas
OAC rule 3745-23-06(B)	See Section A.2.a. below.
40 CFR 60 Subpart Dc	See Section A.2.b. below.

## 2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.
- 2.b** Since natural gas is the only fuel burned, this emissions unit is not subject to the emission limits in 40 CFR Part 60, Subpart Dc.
- 2.c** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of natural gas as fuel, a NOx limitation of 100 lbs of Nox/MMcf and a CO limitation of 84 lbs of CO/MMcf constitutes BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.
- 2.d** **The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM-10 or SO2 emissions from this air contaminant source since the uncontrolled potentials to emit for PM-10 and SO2 are less than ten tons per year.**

## II. Operational Restrictions

**Remaining terms and conditions have been deleted for purpose of this example. We also removed VOC**

and CO limits for purposes of this example.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**2. EXAMPLE T&Cs: PSD limitations reduce the emissions <10 TPY. BAT is equivalent (uncontrolled)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - paved roadways and parking areas (see Section A.2.a)	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru 20. [Note to permit writers: Since the total particulate emissions of the unit are $\geq 10$ tons/yr, BAT applies.]
	OAC rules 3745-31-10 thru 20	6.40 tons/year of PM emissions 3.62 tons/year of PM <sub>10</sub> emissions no visible particulate emissions except for 1 minute during any 60-minute period
	OAC rule 3745-17-07 (B)(4)	best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.c, and A.2.e through A.2.i).
	OAC rule 3745-17-07 (B)(4)	See section A.2.j.
	OAC rules 3745-17-08 (B), (B)(8), (B)(9)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rules 3745-17-08 (B), (B)(8), (B)(9)	The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).

unpaved roadways and parking areas (see Section A.2.b)

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

The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 thru 20.

OAC rules 3745-31-10 thru 20

4.43 tons/year of PM emissions  
2.40 tons/year of PM<sub>10</sub> emissions

no visible emissions, except for three minutes during any 60-minute period

best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.d through A.2.i).

See section A.2.j.

OAC rule 3745-17-07 (B)(5)

The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

OAC rules 3745-17-08 (B), (B)(2)

The control measures specified by these rules are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

- 2.a** The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways:

2.98 miles

- 2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

unpaved roadways:

0.22 mile

- 2.c** The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the

paved roadways and parking areas by flushing with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.d** The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.e** The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- 2.f** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.
- 2.g** The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- 2.h** Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.i** Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.
- 2.j** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of reduced speed limits and water flushing for control constitutes BACT for this emission unit. The emissions limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.

## **II. Operational Restrictions**

**Remaining terms and conditions have been deleted for purpose of this example.**

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**3. EXAMPLE T&Cs: PTE is restricted to avoid PSD and BAT.**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Charge handling of steel scrap Handling of steel scrap is conducted inside of a building.	OAC rule 3745-31-05(C) Synthetic Minor to Avoid BAT and PSD	[Note to permit writers: The controlled PTE at 8760 hr/yr is $\geq 10$ tons/yr, but due to Synthetic Minor limitations, the restricted potential is $< 10$ tons/yr.]  8.12 TPY of PM/PM10 emissions, as a rolling, 12-month summation  [Note to permit writer: Rolling limitation is necessary to avoid PSD, not to avoid BAT.]  See Section A.II.1. below.
	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average.
	OAC rule 3745-17-11	Particulate emissions shall not exceed 25.4 lbs/hr.
	OAC rule 3745-17-08(B)	The permittee shall employ reasonably available control measures consisting of normal operation and maintenance to minimize or eliminate emissions of fugitive dust.
	OAC rule 3745-17-07(A)(1)	Visible emissions from this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

2. **Additional Terms and Conditions**

2.a none

**II. Operational Restrictions**

1. The maximum annual charge rate for this emissions unit shall not exceed 772,391 tons, based upon a rolling, 12-month summation of the tons of scrap steel charged per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	64,366
1-2	128,732
1-3	193,098
1-4	257,464
1-5	321,830
1-6	386,196
1-7	450,562
1-8	514,928
1-9	579,294
1-10	643,660
1-11	708,026
1-12	772,391

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel scrap charge limitation shall be based upon a rolling, 12-month summation.

**Remaining terms and conditions have been deleted for purpose of this example.**

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

1. **EXAMPLE T&Cs:** PSD limitations reduce the emissions <10 TPY. BAT is equivalent (controlled). Note that the assumption is that the entire facility is PSD, therefore this emissions unit has BACT emission limit therefore BAT is equivalent to BACT.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - Dust silo equipped with a bin vent for control of particulate emissions from the Melt Shop Baghouse	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru 20 and 40 CFR Part 60 Subpart AAa.
	OAC rule 3745-31-10 thru 20	0.01 grain/dry standard cubic feet of exhaust gases; 0.10 pound/hour and 0.45 TPY of PM/PM <sub>10</sub> emissions
		See Section A.I.2.a.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 thru 20.
	OAC rule 3745-17-07(A)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to 40 CFR Part 60 Subpart AAa.
	40 CFR Part 60 Subpart AAa	Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.

**2. Additional Terms and Conditions**

- 2.a Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the

application of "Best Available Control Technology" (BACT), it has been determined that the use of a bin vent filter with an emission limit of 0.01 gr/dscf of exhaust gases constitutes BACT for this emissions unit. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.

## II. Operational Restrictions

None.

## III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

## IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
Visible PE shall not exceed 10% opacity, as a 6-minute average, except as provided by rule.  
  
Applicable Compliance Method:  
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
  - b. Emission Limitation:  
PM/PM10 emissions shall not exceed 0.01 grain/dry standard cubic feet of exhaust gases and 0.10 pound/hour

Applicable Compliance Method:

Compliance with the emission limitation shall be determined by the use of the calculation below using the control equipment manufacturer's guaranteed outlet rate of 0.01 gr/dscf and gas flow rate of 1200 acfm at ambient temperature.

$$(0.01 \text{ grain/dscf}) * (1200 \text{ acfm}) * (1 \text{ lb}/7000 \text{ grains}) * (60 \text{ min}/1 \text{ hr}) = 0.10 \text{ lb/hr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:  
0.45 TPY OF PM/PM10 emissions

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton.

Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the lb/hr limitation.

## VI. Miscellaneous Requirements

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

5. EXAMPLE T&Cs: BAT, but not PSD, applies to 1 criteria pollutant and 1 air toxic. PSD applies to the other criteria pollutants, BAT is equivalent

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P900 - 110 TPH capacity Electric Arc Furnace (EAF) with direct evacuation control (DEC) for capture and a baghouse for control of emissions	OAC rule 3745-31-05(A)(3)	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 22.0 lbs/hr
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 thru 20 for PM <sub>10</sub> , NO <sub>x</sub> , CO, VOC and NSPS 40 CFR Part 60 Subpart AAa.
		Emissions from the EAF shall not exceed the following: PM/PM <sub>10</sub> emissions shall not exceed 12.43 lbs/hr and 40.15 TPY
	OAC rules 3745-31-10 thru 20	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 36.29 lbs/hr and 117.25 TPY
		Carbon monoxide (CO) emissions shall not exceed 356.4 lbs/hr and 1,151.2 TPY
		Volatile organic compounds (VOC) emissions shall not exceed 22.0 lbs/hr and 71.06 TPY
		Lead (Pb) emissions shall not exceed 0.000065 gr/dscf, 0.55 lb/hr and 1.78 TPY
		Visible emission shall not exceed three percent opacity from the meltshop

	baghouse stack exit and six percent opacity from the EAF.
	See section A.I.2.a.
OAC rule 3745-31-05(C) Voluntary Restriction to Avoid PSD	71.06 tons of SO <sub>2</sub> per rolling 12-month period.
OAC rule 3745-114-01	Mercury (Hg) emissions shall not exceed 1.2 lbs/day. [Note to permit writers: Although BAT no longer applies to NAAQS pollutants <10 tons/yr, air toxic review is still requ'd for >80% MAGLC]
	See section A.I.2.b.
OAC rule 3745-17-07 (A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 thru 20.
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 thru 20.
OAC rule 3745-18-06(E)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
NSPS 40 CFR Part 60 Subpart AAa	The particulate emission limitation and visible emission limitation specified by this rule are less stringent than the limitations established pursuant to OAC rules 3745-31-10 thru 20.

## 2. Additional Terms and Conditions

- 2.a** The permittee is required to perform a Best Available Control Technology (BACT) review for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>, lead, and VOC. The emissions limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 20 above. The following determinations have been made for this emissions unit:

- PM/PM10- Use of a baghouse with an emission limit of 0.0024 gr/dscf of exhaust gases
- Lead - Use of a baghouse with an emission limit of 0.000065 gr/dscf of exhaust gases
- NOx- Use of DEC Direct Evacuation Control (DEC) system, low NOx oxy-fuel burners and monitoring of specific process variables.
- VOC - Use of DEC Direct Evacuation Control (DEC) system
- CO - Use of DEC Direct Evacuation Control (DEC) system

**2.b** Mercury emissions shall be controlled by using the baghouse and by restricting the amount of mercury containing scrap used in the process. For purposes of this permit to install, "mercury containing scrap" is defined as #2 bundles or shredded (frag) scrap consisting in part of either automobile or white goods scrap obtained from a source where the readily accessible mercury containing devices have not been removed prior to crushing or shredding.

**II. Operational Restrictions**

1. ~~The pressure drop across the meltshop baghouse shall be maintained within the range of 3.0 to 8.0 inches of water while the emissions unit is in operation.~~

*To be moved to monitoring section using new GE Language*

2. The emissions from P900 shall be vented to the melt shop baghouse. In addition, the capture system shall be designed and operated such that all emissions are captured and ducted to the dropout chamber and then to the baghouse. The capture system for the emissions unit shall include a common canopy hood and roof control system. The emissions from the furnace roof vent to the dropout and then to the meltshop baghouse.
3. The maximum annual production rate for this emissions unit shall not exceed 710,600 tons of steel, based upon a rolling, 12-month summation of the tons of steel produced per month. In order to ensure federal enforceability during the first twelve months of operation after the permit issuance, the permittee shall comply with the following monthly production restrictions:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Production Totals (Tons)</u>
1	59,220
1-2	118,440
1-3	177,660
1-4	236,880
1-5	296,100
1-6	355,320

1-7	414,540
1-8	473,760
1-9	532,980
1-10	592,200
1-11	651,420
1-12	710,600

After the first 12 calendar months of operation after the issuance of this permit, compliance with the annual steel production limitation shall be based upon a rolling, 12-month summation of the steel production.