

# Engineering Guide 69 (Revised July 22, 2014)

**Table 3  
Federal (a) and State Modeling Standards and Significant Emission Rates**

Pollutant	National Ambient Air Quality Standards (NAAQS)			PSD Significant Emission Rate (tpy)	PSD Class I		PSD Class II		PSD Monitoring De Minimis Concentration (ug/m <sup>3</sup> )	Ohio EPA	
	Averaging Period	Primary Standard	Secondary Standard		PSD Increment (ug/m <sup>3</sup> )	Significant Impact Levels (ug/m <sup>3</sup> )	PSD Increments (ug/m <sup>3</sup> )	Significant Impact Levels (ug/m <sup>3</sup> )		Ohio Modeling Significant Emission Rates (tpy)	Generally Acceptable Incremental Impact (ug/m <sup>3</sup> )(b)
Reference(s)	A			B	C	D, E	C	D, F, G, H	I		
PM2.5 (c)	Annual (2012)	12 ug/m <sup>3</sup> (d)	15 ug/m <sup>3</sup> (d)	PM2.5 – 10 SO2 – 40 NOx - 40	1 (e)	0.06 (e)	4 (e)	0.3 (e)	-----	10	2(e)
	Annual (1997)	15 ug/m <sup>3</sup> (d)	15 ug/m <sup>3</sup> (d)		1 (e)	0.06 (e)	4 (e)	0.3 (e)	-----		(2)(e)
	24-hr	35 ug/m <sup>3</sup> (f)	35 ug/m <sup>3</sup> (f)		2 (g)	0.07 (e)	9 (g)	1.2 (e)	0 (e)		4.5(g)
PM10 (c)	Annual	----	----	15	4 (e)	0.2 (e)	17 (e)	1 (e)	-----	15	8.5 (e)
	24-hr	150 ug/m <sup>3</sup> (h)	150 ug/m <sup>3</sup> (h)		8 (g)	0.3 (e)	30 (g)	5 (e)	10 (e)		15 (g)
Sulfur Dioxide	Annual	0.030 ppm (80 ug/m <sup>3</sup> ) (i)		40	2 (e)	0.1 (e)	20 (e)	1 (e)	-----	40	10 (e)
	24-hr	0.14 ppm (365 ug/m <sup>3</sup> ) (j)			5 (g)	0.2 (e)	91 (g)	5 (e)	13 (e)		45.5 (g)
	3-hr	----	0.5 ppm (1300 ug/m <sup>3</sup> ) (g)		25 (g)	1.0 (e)	512 (g)	25 (e)	-----		256 (g)
	1-hr	75 ppb (196 ug/m <sup>3</sup> ) (k)	----		-----	-----	----	7.9 (e)	-----		196(e)
Nitrogen Dioxide	Annual	53 ppb (100 ug/m <sup>3</sup> ) (e)	53 ppb (100 ug/m <sup>3</sup> ) (e)	40	2.5 (e)	0.1 (e)	25 (e)	1 (e)	14 (e)	40	12.5 (e)
	1-hr	100 ppb (188 ug/m <sup>3</sup> ) (l)	----		-----	-----	----	7.5 (e)	-----		188(e)
Ozone	8-hr (2008)	0.075 ppm (m)	0.075 ppm (m)	VOC - 40 NOx - 40(n)	-----	-----	-----	-----	-----	-----	-----
	8-hr (1997)	0.08 ppm (m)	0.08 ppm (m)		----	----	----	----	----		
Carbon Monoxide	8-hr	9 ppm (10,000 ug/m <sup>3</sup> ) (g)	----	100	-----	-----	-----	500 (e)	575 (e)	100	2500 (g)
	1-hr	35 ppm (40,000 ug/m <sup>3</sup> ) (g)	----		-----	-----	-----	2000 (e)	-----		10000 (g)
Lead	Rolling 3-Month	0.15 ug/m <sup>3</sup> (e)	0.15 ug/m <sup>3</sup> (e)	0.6	-----	-----	-----	-----	0.1(p)-	0.6	0.0375(e)
Air Toxics (1-hr)	Not Applicable									1	MAGLC (e),(q) & (r)

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- Represents a SIL, increment, monitoring requirement, or NAAQS was not effective at the time this guide was finalized or is not currently applicable to this pollutant. When there is a discrepancy (e.g., a revision to a standard made by U.S. EPA that has not yet been incorporated into this guide), U.S. EPA's standards should be utilized until such time as Table 3 is updated.
- (a) With respect to criteria pollutants, it is Ohio EPA's intention to follow U.S. EPA modeling thresholds. When there is a discrepancy (e.g., an update made by U.S. EPA that has not yet been incorporated into this guide), U.S. EPA's modeling thresholds should be utilized in the evaluations until such time as Table 3 is updated.
  - (b) Please note that the Director always reserves the right to request modeling for projects that fall below these thresholds if it is believed that they may cause or contribute to an exceedance.
  - (c) Filterable + Condensable.
  - (d) The 3-year average of the weighted annual mean PM<sub>2.5</sub> concentrations must not exceed the NAAQS.
  - (e) Concentration not to be exceeded.
  - (f) The 3-year average of the 98th percentile of 24-hr concentrations must not exceed the NAAQS.
  - (g) Not to be exceeded more than once per year.
  - (h) Not to be exceeded more than once per year on average over three years.
  - (i) Concentration not to be exceeded. This standard is revoked one year after the effective date of U.S. EPA designations under the 1-hr standard for an area. For Ohio's nonattainment areas, that date is October 4, 2014. U.S. EPA has not made any designations (attainment or unclassifiable) for other areas of Ohio.
  - (j) Not to be exceeded more than once per year. This standard is revoked one year after the effective date of U.S. EPA designations under the 1-hr standard for an area. For Ohio's nonattainment areas, that date is October 4, 2014. U.S. EPA has not made any designations (attainment or unclassifiable) for other areas of Ohio.
  - (k) The 3-year average of the 99th percentile of the daily maximum 1-hr average at each monitor within an area must not exceed the NAAQS.
  - (l) The 3-year average of the 98th percentile of the daily maximum 1-hr average at each monitor must not exceed the NAAQS.
  - (m) The 3-year average of the fourth-highest daily maximum 8-hr average ozone concentrations must not exceed the NAAQS.
  - (n) Emissions of VOC or NO<sub>x</sub>.
  - (o) Not to be exceeded on more than one day per year, three year average.
  - (p) Not to be exceeded on a 3-month rolling average basis.
  - (q) Value calculated by procedures outlined in current version of the Ohio EPA Division of Air Pollution Control document entitled "Review of New Sources of Air Toxic Emissions – Option A."
  - (r) Note that modeling may be required by Ohio EPA when the emission rate is less than 1.0 ton/yr in the case of "highly toxic" compounds. If the permittee believes that a compound that will be emitted might be considered "highly toxic" please contact the Ohio EPA permit writer to discuss the need for modeling.

### References

- A NAAQS are found in 40 CFR Part 50.
- B PSD Significant Emission Rates are found in 40 CFR 52.21(b)(23)(i).
- C PSD Class I and Class II Ambient Air Increments are found in 40 CFR 52.21(c).
- D The PM<sub>2.5</sub> Class I and Class II Significant Impact Levels are based on U.S. EPA's "Guidance for PM<sub>2.5</sub> Permit Modeling, May 20, 2014."
- E The PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> Class I Significant Impact Levels are based on the July 23, 1996 NSR Reform Proposed Rulemaking (61 FR 38249).
- F The 1-hr SO<sub>2</sub> Class II Significant Impact Level is based on U.S. EPA's "Guidance Concerning the Implementation of the 1-hour SO<sub>2</sub> NAAQS for the Prevention of Significant Deterioration Program, August 23, 2010."
- G The 1-hr NO<sub>2</sub> Class II Significant Impact Level is based on U.S. EPA's "General Guidance for Implementation of the 1-hour NO<sub>2</sub> NAAQS in Prevention of Significant Deterioration Permits, Including an Interim 1-hour NO<sub>2</sub> Significant Impact Level, June 28, 2010."
- H The Class II Significant Impact Levels for PM<sub>10</sub>, NO<sub>2</sub> (annual), and SO<sub>2</sub> (annual, 24-hr and 3-hr) are found in 40 CFR 51.165(b)(2).
- I The PSD Monitoring De Minimis Concentrations are found in 40 CFR 52.21(i)(5)(i).