

Important New Source Review (NSR) Values

NSR Regulated Pollutant	Major Source Thresholds, tpy		Averaging Time Period	Form ¹	NAAQS ²				PSD Increments (µg/m ³)			Significant Emissions Increase	Significant Impact Levels (SIL)	Monitoring <i>de minimis</i> Levels (SMC)
					Primary		Secondary		Area Classification					
	PSD ³	NAA ⁴			µg/m ³	ppm	µg/m ³	ppm	I	II	III	Tons/year	µg/m ³	µg/m ³
PM-10 ⁵	250/100 ⁶	100/70 ⁷	24 hour	a	150	--	150	---	8	30	60	15	5	10
			Annual	b	---	---	---	---	4 ²³	17	34		1	--
PM-2.5 ⁸	250/100	100	24 hour	c	35	--	35	---	2 ⁹	9	18	10 (direct emissions) ⁹ 40 (SO ₂ /NO _x precursors)	1.2 (NAAQS); 0.27, 1.2, 1.2 ⁹	4 ⁹
			Annual	d	9	--	15	--	1	4	8		0.2 (NAAQS); 0.05, 0.2, 0.2 ⁹	--
SO ₂	250/100	100	1 hour	k	--	0.075	--	--	--	--	--	40	--	--
			3 hour	e	--	--	1300	0.5	25	512	700		25	--
			24 hour ²⁸	e	--	--	--	--	5	91	182		5	13
			Annual ²⁸	f	--	--	--	--	2	20	40		1	--
NO ₂	250/100	100	1 hour	j	--	0.100	--	--	--	--	--	--	--	--
			Annual	f	100	0.053	100	0.053	2.5	25	50	40	1	14
Ozone ¹⁰ (VOC/NO _x)	250/100	100/50/ 25/10 ¹¹	1 hour	g	235	0.12	235	0.12	--	--	--	40/25/any ¹²	--	100 tpy or more net emissions increase
			8 hour ¹³	h	--	0.070 ²⁵	--	0.070	--	--	--		1.0 ppb (NAAQS SIL) ¹⁴	
CO	250/100	100/50 ¹⁵	1 hour	e	40,000	35	--	--	--	--	--	100	2000	--
			8 hour	e	10,000	9	--	--	--	--	--		500	575
Lead (Pb)	250/100	100	Calendar Quarter	i	--	--	--	--	--	--	--	0.6	--	0.1 ¹⁶
			Rolling 3-month average	l	0.15	--	0.15	--	--	--	--		--	
PM (particulate matter)	250/100	--	--	--	--	--	--	--	--	--	--	25	--	--
Fluorides ¹⁷	250/100	--	--	--	--	--	--	--	--	--	--	3	--	0.25 (24-hr average)
Sulfuric Acid Mist ¹⁸	250/100	--	--	--	--	--	--	--	--	--	--	7	--	--
TRS ¹⁹	250/100	--	--	--	--	--	--	--	--	--	--	10	--	10 (1-hr average)
RSC ²⁰	250/100	--	--	--	--	--	--	--	--	--	--	10	--	10 (1-hr average)
ODS ²¹	250/100	--	--	--	--	--	--	--	--	--	--	Any Increase ²⁴	--	--
MWC ²² Acid Gases	250/100	--	--	--	--	--	--	--	--	--	--	40	--	--
MWC Metals	250/100	--	--	--	--	--	--	--	--	--	--	15	--	--
MWC Organics ²³	250/100	--	--	--	--	--	--	--	--	--	--	3.5x10 ⁻⁶	--	--
MSWL ²⁴ Emissions	250/100	--	--	--	--	--	--	--	--	--	--	50	--	--
Greenhouse gases (GHG), calculated as CO ₂ e ²⁶	NA ²⁷	--	--	--	--	--	--	--	--	--	--	Any, and 75,000 ²⁷ (For BACT applicability)	--	--

¹ The form of the NAAQS is expressed as follows:

- a) Not to be exceeded more than once per year on average over a 3-year period.
- b) Annual arithmetic mean of 50 $\mu\text{g}/\text{m}^3$, averaged over three years, was deleted 10/17/06 (71 FR 61144). Annual PM_{10} PSD increments were not deleted, but their future is uncertain.
- c) 98th percentile of concentrations in a given year, averaged over three years. Changed from 65 to 35 $\mu\text{g}/\text{m}^3$ 10/17/06 (71 FR 61224).
- d) Annual arithmetic mean (from single or multiple monitors), averaged over three years. Changed from 12 $\mu\text{g}/\text{m}^3$ to 9 $\mu\text{g}/\text{m}^3$ on 2/7/24 (89 FR 16202).
- e) Not to be exceeded more than once per calendar year
- f) Annual arithmetic mean
- g) Not to be exceeded more than three times in three consecutive years
- h) Three-year average of annual 4th-highest daily maximum 8-hr concentration
- i) Maximum calendar quarterly arithmetic mean
- j) Three year average of the annual 98th percentile of the daily maximum 1-hour average concentration. Effective 4/12/10. 75 FR 6474 (2/9/10)
- k) Three year average of the annual 99th percentile of 1-hour daily maximum concentrations. Effective 8/23/10. 75 FR 35520 (6/22/10). Rule also revoked 24-hour and annual primary SO_2 standards one year after an area is designated attainment or nonattainment except in nonattainment areas as of 8/23/10. See footnote 28.
- l) Maximum rolling quarterly average (yield 12 three-month averages each year). Three year data (36 three month averages) is used to demonstrate attainment.

² National Ambient Air Quality Standards are ambient concentrations that are applicable nationwide and are not to be exceeded. NAAQS have been established for only 6 pollutants (7 if $\text{PM}_{2.5}$ and PM_{10} are considered separate pollutants). Areas exceeding a NAAQS are classified as nonattainment areas (NAA).

³ The Prevention of Significant Deterioration program applies to attainment areas (which meet the NAAQS) and unclassifiable areas. An area may be attainment for some pollutants and nonattainment for others.

⁴ Areas exceeding a NAAQS are classified as NAA for that pollutant; these have different major source thresholds. States must develop attainment plans for such areas.

⁵ The NAAQS for PM_{10} replaced the NAAQS for the form of particulate matter called Total Suspended Particulate (TSP) on 7/31/87. The PSD increments for TSP were replaced with increments for PM_{10} on 6/3/94. However, some States have not yet switched to PM_{10} , so are still regulating TSP, while a few States have elected to regulate both TSP and PM_{10} .

⁶ PSD source categories listed in the rule have a 100 tpy threshold; all other source categories have a 250 tpy threshold.

⁷ The threshold is 70 tpy in serious PM_{10} nonattainment areas.

⁸ The last revision to $\text{PM}_{2.5}$ annual NAAQS was promulgated on 1/15/2013 (78 FR 3086). The EPA did not change the 24 hour $\text{PM}_{2.5}$ standard in this rulemaking.

⁹ PSD significant emission rates were promulgated 5/16/08 (73 FR 28321). PSD increments, significant impact levels (SILs), and significant monitoring concentration (SMC) were promulgated 10/20/10; the SIL and SMC are effective 12/20/10 while the increments are effective 10/20/11 (one year from publication date). The SILs for $\text{PM}_{2.5}$ are the only ones with different values for the 3 different area classifications and are listed in the following order: Class I, II and III. Significance levels for other possible precursors (VOC, ammonia) will be set by agency when finding that the pollutant contributes significantly to $\text{PM}_{2.5}$ ambient concentrations is made. $\text{PM}_{2.5}$ SIL and SMC in PSD rules were vacated by DC Circuit Court on January 22, 2013. On 4/17/18, EPA revised its recommended SIL values for $\text{PM}_{2.5}$ and for the first time gave different SIL for NAAQS and PSD increments; the first SIL in the table is the NAAQS SIL, with the next 3 SIL being for Class I, II, and III increments. [65P] EPA noted that it could not change the $\text{PM}_{2.5}$ 24-hour NAAQS SIL because it is embedded in the regulations.

¹⁰ VOC and NO_x emissions are regulated as ozone precursors in nonattainment and attainment/unclassifiable areas since 11/29/05 (prior to that NO_x was an ozone precursor only in nonattainment areas), except in nonattainment areas where a CAA §182(f) exclusion for NO_x as an ozone precursor has been granted. 70 FR 71612

¹¹ VOC and NO_x major source thresholds are 100 tpy in marginal and moderate areas, 50 tpy in serious areas, 25 tpy in severe areas, and 10 tpy in extreme areas. In ozone transport regions the thresholds are 50 tpy for VOC and 100 tpy for NO_x .

¹² VOC and NO_x significant emissions increase levels are 40 tpy in attainment/unclassifiable, marginal nonattainment, moderate nonattainment, and serious nonattainment areas; 25 tpy in severe nonattainment areas; and any increase in extreme nonattainment areas. Increases in serious and severe nonattainment areas are also affected by CAA §182(c)(6), which limits aggregated VOC and NO_x emissions increases over a five-year period to less than 25 tpy to avoid major NSR. Internal offsets provide an alternative.

¹³ The new 8-hour ozone NAAQS was promulgated on July 18, 1997. The 1-hour standard will remain in effect for ozone nonattainment areas only. Revisions were proposed 1/19/10 to lower the primary 8-hour standard and convert the secondary 8-hour standard into a cumulative seasonal standard.

¹⁴ On 4/17/18, EPA issued its first ozone SIL, to be used to determine whether there is a significant impact from a proposed source. Note that it is in ppb, not $\mu\text{g}/\text{m}^3$. [65P]

¹⁵ The threshold is 50 tpy in certain serious CO nonattainment areas where EPA has established by rule that stationary sources contribute significantly to CO levels.

¹⁶ The monitoring *de minimis* level for lead is a three-month arithmetic average, as compared to a calendar quarter arithmetic average for the lead NAAQS

¹⁷ Includes fluoride compounds other than hydrogen fluoride (HF), which is a hazardous air pollutant and is therefore exempted from PSD regulation pursuant to CAA § 112(b)(6). See 61 FR 38250 (7/23/1996) and 75 FR 31514 (6/3/2010).

¹⁸ The pollutant Sulfuric Acid Mist is defined at 40 CFR § 60.81 to include sulfur tri-oxide and sulfuric acid vapor as measured using Method 8.

¹⁹ Total Reduced Sulfur, which is equivalent to hydrogen sulfide (H_2S). The pollutant TRS is defined at 40 CFR § 60.101 to include carbonyl sulfide and carbon disulfide, but those gases are hazardous air pollutants and are therefore exempted from PSD regulation pursuant to CAA § 112(b)(6). See 61 FR 38250 (7/23/1996) and 75 FR 31514 (6/3/2010).

²⁰ Reduced Sulfur Compounds, including H_2S . This pollutant is defined at 40 CFR § 60.281 and also includes dimethyl disulfide, dimethyl sulfide, and methyl mercaptan.

²¹ These are the 80+ compounds designated as Stratospheric Ozone Depleting Substances (ODS) in 40 CFR 82. Most are CFC's and halons.

²² Municipal Waste Combustors. Hydrochloric acid (HCl) emissions from this source category, which is a hazardous air pollutant, is exempted from PSD regulation pursuant to CAA § 112(b)(6). See 61 FR 38250 (7/23/1996) and 75 FR 31514 (6/3/2010)

²³ Organics in this case are defined by the test method and consist of dioxins and furans.

²⁴ Municipal Solid Waste Landfill

²³ Although the annual PM₁₀ NAAQS was dropped 10/17/06, the annual average PM₁₀ PSD increments were not. They remain in effect, although their future is uncertain. EPA has asked whether PM increments are even needed, and could drop all PM increments, switch to PM_{2.5} increments, or do something else entirely.

²⁴ A 100 tpy significance level has been proposed and EPA policy is to not object to non-PSD permitting for ODS increases below 100 tpy.

²⁵ Revised to 0.070 ppm, effective December 28, 2015 (80 FR 65292). Old 0.075 ppm, effective 5/27/08 (73 FR 16436) remains in place. Future implementation rule will address revocation of the older standard.

²⁶ CO₂e is the aggregate total of 6 greenhouse gases (CO₂, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride), calculated by multiplying the mass of each compound by its Global Warming Potential (GWP) and summing the totals.

²⁷ On 6/23/2014, the Supreme Court vacated the EPA's tailoring rule for GHGs. However, it retained EPA's authority to require BACT for GHGs for "anyway" major stationary sources and major modifications that are subject to PSD review for non-GHG pollutants and CO₂e emissions are greater than 75,000 tpy.

²⁸ The 0.14 ppm 24 hour and 0.030 ppm annual standards in 40 CFR 50.4 remained applicable to all areas until one year after the effective date of the designation of an area, pursuant to section 107 of the Clean Air Act (as attainment or nonattainment), for the 1-hour SO₂ NAAQS set forth in 40 CFR 50.17; except that for areas (a) designated nonattainment for the 24 hour or annual SO₂ NAAQS as of the effective date of 40 CFR 50.17 (8/23/10), and (b) not meeting the requirements of a SIP call with respect to requirements for the 24 hour or annual SO₂ NAAQS, the 24 hour and/or annual SO₂ NAAQS will apply until that area submits, pursuant to section 191 of the Clean Air Act, and EPA approves, an implementation plan providing for attainment of the 1 hour SO₂ NAAQS set forth in 40 CFR §50.17. The EPA completed the initial round of designations in 8/5/2013 rulemaking (78 FR 47191). The designations became effective on 10/4/2013. The SO₂ 24 hour and annual standards revoked on 10/3/2014 for all areas except areas that were designated nonattainment for these standards. The 3-hour secondary SO₂ NAAQS remains in place.



RTP

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