DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

18 AAC 50

AIR QUALITY CONTROL

Public Comment Draft

March 2, 2012

Comment Period Ends
April 10, 2012, 5:00 p.m.

Sean Parnell
Governor

Larry Hartig
Commissioner

18 AAC 50.010(5) is amended to read:

(5) for **oxides of nitrogen, measured as** nitrogen dioxide:

(A) annual **average** [ARITHMETIC MEAN] **nitrogen dioxide concentration** of 100 micrograms per cubic meter**; with this standard being attained when the average of the one-hour nitrogen dioxide concentrations in a calendar year is less than or equal to 100 micrograms per cubic meter, as determined in accordance with 40 C.F.R. Part 50, Appendix S, adopted by reference in 18 AAC 50.035(b)**;

(B) one-hour average nitrogen dioxide concentration of 188 micrograms per cubic meter, with this standard being attained when the three-year average of the annual, 98th percentile, daily maximum, one-hour nitrogen dioxide concentration is less than or equal to 188 micrograms per cubic meter, as determined in accordance with 40 C.F.R. Part 50, Appendix S, adopted by reference in 18 AAC 50.035(b); (Eff. 1/18/97, Register 141; am 6/21/98, Register 146; am 10/1/2004, Register 171; am 4/1/2010, Register 193; am 9/17/2011, Register 199; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.030 Sec. 30, ch. 74, SLA 1993
AS 46.14.010

18 AAC 50.020, Table 2 is amended to read:

Table 2.

Baseline Areas and Dates

Baseline Area [AIR QUALITY CONTROL REGION]	Air Pollutant	**Minor Source** Baseline Date
Cook Inlet Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	October 12, 1979
	PM-10	March 20, 1982
	PM-2.5	**To be established per 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h).**
Northern Alaska Intrastate	Nitrogen dioxide	February 8, 1988

	Sulfur dioxide	June 1, 1979
	PM-10	November 13, 1978
	PM-2.5	**To be established per 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h).**
South Central Alaska Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	October 26, 1979
	PM-10	October 26, 1979
	PM-2.5	**To be established per 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h).**
Southeast Alaska Intra-	Nitrogen dioxide	February 8, 1988

	Sulfur dioxide	November 10, 1986
	PM-10	**To be established per 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h).** [THE EARLIEST DATE UPON WHICH THE DEPARTMENT DECLARES COMPLETE AN APPLICATION FOR A FACILITY OR MODIFICATION THAT INCLUDES INFORMATION REQUIRED UNDER 18 AAC 50.306 AND SHOWS AN INCREASE IN ACTUAL PM-10 EMISSIONS EQUAL TO OR EXCEEDING 15 TONS PER YEAR.]
	PM-2.5	**To be established per 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h).**

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18 AAC 50.020(b) is amended to read:

(b) To establish standards for the prevention of significant deterioration of air quality,

(1) **minor source** baseline dates for determining the ambient concentration of certain air pollutants are established for each **baseline area** [AIR QUALITY CONTROL REGION] listed in Table 2 in (a) of this section;

(2) in areas designated as Class I, II, or III, increases in air pollutant concentration over the baseline concentration shall be limited to the concentrations in Table 3 in this subsection;

(3) for any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location; [AND]

(4) the baseline concentrations and maximum allowable increases shall be measured or predicted by a method described in 18 AAC 50.215**; and** [.]

(5) no concentration shall exceed the ambient air quality standard described in 18 AAC 50.010 for that pollutant.

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Table 3 of 18 AAC 50.020 is amended to read:

Table 3.

Maximum Allowable Increases

Classification of area in 18 AAC 50.015(c) Table 1	Air Pollutant	Maximum allowable increase (micrograms per cubic meter)

CLASS I	PM-10: Annual arithmetic mean ..... 24-hour maximum	 .....4 8
	Sulfur dioxide: Annual arithmetic mean ..... 24-hour maximum ..... 3-hour maximum	 .....2 .....5 25
	Nitrogen dioxide: Annual arithmetic mean	 .....2.5
	PM-2.5: **Annual arithmetic mean .....** **24-hour maximum .....**	 **.....1** **.....2**
CLASS II	PM-10: Annual arithmetic mean ..... 24-hour maximum	 .....17 30

	Sulfur dioxide: Annual arithmetic mean ..... 24-hour maximum ..... 3-hour maximum	 .....20 .....91 512
	Nitrogen dioxide: Annual arithmetic mean	25
	PM-2.5: **Annual arithmetic mean .....** **24-hour maximum .....**	 **.....4** **.....9**
CLASS III	PM-10: Annual arithmetic mean ..... 24-hour maximum	 .....34 60
	Sulfur dioxide: Annual arithmetic mean ..... 24-hour maximum ..... 3-hour maximum	 .....40 .....182 700

	Nitrogen dioxide: Annual arithmetic mean	50
	PM-2.5: **Annual arithmetic mean .....** **24-hour maximum .....**	**.....8** **.....18**

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18 AAC 50.020(e) is amended to read:

(e) **For purposes of this section, the baseline concentrations within a baseline area are determined according to the provisions in 40 C.F.R. 52.21(b)(13), adopted by reference in 18 AAC 50.040(h).** [FOR PURPOSES OF THIS SECTION, THE BASELINE CONCENTRATION OF AN AIR POLLUTANT IS DETERMINED AS FOLLOWS:

(1) FOR PM-10 AND SULFUR DIOXIDE, THE BASELINE CONCENTRATION IS THE AMBIENT CONCENTRATION OF THE AIR POLLUTANT ON THE APPLICABLE BASELINE DATE, PLUS THE CONTRIBUTION FROM ALLOWABLE EMISSIONS OF A PSD MAJOR STATIONARY SOURCE FOR WHICH CONSTRUCTION COMMENCED BEFORE JANUARY 6, 1975, BUT THAT WAS NOT IN OPERATION BY THE BASELINE DATE; HOWEVER, THE BASELINE CONCENTRATION DOES NOT INCLUDE ACTUAL EMISSIONS FROM A PSD MAJOR STATIONARY SOURCE OR A PSD MAJOR MODIFICATION FOR WHICH CONSTRUCTION COMMENCED ON OR AFTER JANUARY 6, 1975; AND

(2) FOR NITROGEN DIOXIDE, THE BASELINE CONCENTRATION IS THE AMBIENT CONCENTRATION OF THE AIR POLLUTANT ON THE APPLICABLE BASELINE DATE, PLUS THE CONTRIBUTION FROM ALLOWABLE EMISSIONS OF A PSD MAJOR STATIONARY SOURCE FOR WHICH CONSTRUCTION COMMENCED BEFORE FEBRUARY 8, 1988, BUT THAT WAS NOT IN OPERATION BY THE BASELINE DATE.]

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18 AAC 50.020 is amended by adding a new paragraph to read:

(g) For purposes of this section, the baseline area means every part of an "air quality control region" described in 18 AAC 50.015 designated as attainment or unclassifiable in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the baseline date is established, as follows: equal to or greater than 1 microgram per cubic meter (annual average) for sulfur dioxide, nitrogen dioxide, or PM-10; or equal to or greater than 0.3 micrograms per cubic meter (annual average) for PM-2.5. The baseline areas established as of *{adoption date of the regulations}* are listed in Table 2 of this section.

(Eff. 1/18/97, Register 141; am 6/21/98, Register 146; am 10/1/2004, Register 171; am 7/25/2008, Register 187; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.010 AS 46.14.030

The lead-in language of 18 AAC 50.030 is amended to read:

18 AAC 50.030. State air quality plan. Volumes II and III of the *State Air Quality Control Plan* for implementing and enforcing the provisions of AS 46.14 and this chapter, as amended through ***{adoption date of the regulations}*** [JULY 13, 2011], are adopted by reference. The plan includes the following documents which are also adopted by reference:

(Eff. 1/18/97, Register 141; am 6/21/98, Register 146; am 9/4/98, Register 147; am 1/1/2000, Register 152; am 12/30/2000; Register 156; am 9/21/2001, Register 159; am 1/27/2002, Register 161; am 3/27/2002, Register 161; am 5/3/2002, Register 162; am 2/20/2004, Register 169; am 6/24/2004, Register 170; am 10/1/2004, Register 171; am 12/14/2006, Register 180; am 12/30/2007, Register 184; am 5/17/2008, Register 186; am 7/25/2008, Register 187; am 11/9/2008, Register 188; am 5/6/2009, Register 190; am 11/4/2009, Register 192; am 4/1/2010, Register 193; am 10/29/2010, Register 196; am 4/13/2011, Register 198; am 9/17/2011, Register 199; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.030 Sec. 30, ch. 74, SLA 1993
AS 46.14.020 AS 46.14.140

18 AAC 50.035(b)(1) is amended to read:

(1) 40 C.F.R. Part 50, Appendices A, D, F, G, J, K, L, N, P, Q, R, **S,** and T;

(Eff. 1/18/97, Register 141; am 6/21/98, Register 146; am 7/2/2000, Register 154; am 2/2/2002, Register 161; am 5/3/2002, Register 162; am 10/1/2004, Register 171; am 12/3/2005, Register 176; am 7/25/2008, Register 187; am 11/9/2008, Register 188; am 4/1/2010, Register 193; am 9/17/2011, Register 199; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.020 AS 46.14.140
AS 46.14.010 AS 46.14.030 Sec. 30, ch. 74, SLA 1993

The lead-in language of 18 AAC 50.040(h) is amended to read:

(h) The following provisions of 40 C.F.R. Part 51.166 (Prevention of Significant Deterioration of Air Quality) and 40 C.F.R. 52 (Approval and Promulgation of Implementation Plans**)**, as revised as of **July 1, 2011** [AUGUST 2, 2010], are adopted by reference:

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18 AAC 50.040(h)(4) is amended by adding a new paragraph to read:

(D) 40 C.F.R. 52.21(b)(15) ("baseline area") is not adopted, and the term defined in that provision has the meaning given in 18 AAC 50.020(g).

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18 AAC 50.040(h)(5) is repealed:

(5) repealed __/__/____ [40 C.F.R. 52.21(d) (Ambient Air Ceilings)];

(Eff. 1/18/97, Register 141; am 6/14/98, Register 146; am 6/21/98, Register 146; am 7/2/2000, Register 154; am 6/1/2002, Register 162; am 8/15/2002, Register 163; am 10/1/2004, Register 171; am 12/3/2005, Register 176; am 7/25/2008, Register 187; am 12/9/2010, Register 196; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.020 AS 46.14.030
AS 46.14.010

18 AAC 50.215(b)(2) is amended to read:

(2) for comparing predicted or measured ambient concentrations of an air pollutant to a maximum allowable increase established under **18 AAC 50.020** [18 AAC 50.020(B)(2)], exclude

(A) concentrations attributable to a temporary construction activity for a new or modified source: and

(B) the [INCREASE IN] concentrations **described under 40 C.F.R. 51.166(f), adopted by reference in 18 AAC 50.040(h)** [ATTRIBUTABLE TO NEW SOURCES OUTSIDE THE UNITED STATES OVER THE CONCENTRATIONS ATTRIBUTABLE TO EXISTING SOURCES INCLUDED IN THE BASELINE CONCENTRATION].

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The lead-in language of 18 AAC 50.215(d) and Table 5 are amended to read:

(d) Table 5 establishes the significant impact level **(SIL)**, expressed as micrograms per cubic meter, for each pollutant and averaging period. If the ambient impacts from emissions from a stationary source or modification are less than the concentrations in Table 5, the emissions are not considered to cause or contribute to a violation of an ambient air quality standard or maximum allowable increase for a Class II area. **The comparison of a modeled impact to the SIL shall be conducted as follows:**

(1) for the 24-hour PM-2.5 SIL, the annual average PM-2.5 SIL, the 1-hour nitrogen dioxide SIL, or the 1-hour sulfur dioxide SIL,

(A) compare the highest modeled concentration when using either 1-year of meteorological data or screening meteorological data; or

(B) the highest multi-year average concentration when using a multi-year meteorological data set; and

(2) for all other pollutants and averaging periods, use the highest modeled concentration.

Table 5.

Significant Impact Levels (SILs)

Pollutant	Significant impact level (micrograms per cubic meter)				
	Averaging Period				
	Annual	24-hours	8-hours	3-hours	1-hour
Sulfur dioxide	1.0	5	N/A	25	8
PM-10	1.0	5	N/A	N/A	N/A
PM-2.5	0.3	1.2	N/A	N/A	N/A
Nitrogen dioxide	1.0	N/A	N/A	N/A	**8**[N/A]
Carbon monoxide	N/A	N/A	500	N/A	2,000

Note to Table 5: In this table, "N/A" means not applicable.

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18 AAC 50.215 is amended by adding the following editor's note:

Editor's note: The Class I SILs for PM-2.5 are in 40 C.F.R. 52.21(k)(2), adopted by reference in 18 AAC 50.040(h). There are no Class I SILs for any other air pollutant as of *{adoption date of the regulations}*.

(Eff. 1/18/97, Register 141; am 6/21/98, Register 146; am 10/1/2004, Register 171; am 7/25/2008, Register 187; am 4/1/2010, Register 193; am 10/29/2010, Register 196; 9/17/2011, Register 199; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.140 Sec. 30, ch. 74, SLA 1993
AS 46.14.030 AS 46.14.180

18 AAC 50.306(b)(1)(C) is amended to read:

(C) the term "ambient air increment" or "maximum allowable increase" means a maximum allowable increase set out in Table 3 in 18 AAC 50.020(b)**, calculated as described in 18 AAC 50.020**;

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18 AAC 50.306(b)(2) is amended to read:

(2) exclusions from increment consumption apply to the maximum extent allowed under **18 AAC 50.215(b)(2)** [40 C.F.R. 51.166(F), ADOPTED BY REFERENCE IN 18 AAC 50.040];

(Eff.10/1/2004, Register 171; am 7/25/2008, Register 187; am 12/9/2010, Register 196; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.120 AS 46.14.170
AS 46.14.010 AS 46.14.130 AS 46.14.180
AS 46.14.020 AS 46.14.140

18 AAC 50.502(c)(1) is amended to read:

(1) beginning actual construction of a new stationary source with a potential to emit greater than

(A) 15 TPY of PM-10;

(B) 40 TPY of nitrogen oxides;

(C) 40 TPY of sulfur dioxide;

(D) 0.6 TPY of lead; [OR]

(E) 100 TPY of carbon monoxide within 10 kilometers of a carbon monoxide nonattainment area; or

(F) 10 TPY of direct PM-2.5 emissions; or

…

18 AAC 50.502(c)(3) is amended to read:

(3) beginning a physical change to or a change in the method of operation of an existing stationary source with a potential to emit an air pollutant greater than an amount listed in (1) of this subsection that will cause for that pollutant an emissions increase calculated at the discretion of the owner or operator as either an increase in

(A) potential to emit that is greater than

(i) 10 TPY of PM-10;

(ii) 10 TPY of sulfur dioxide;

(iii) 10 TPY of nitrogen oxides; [OR]

(iv) 100 TPY of carbon monoxide for a stationary source within 10 kilometers of a carbon monoxide nonattainment area; or

(v) 10 TPY of direct PM-2.5 emissions; or

(B) actual emissions and a net emissions increase greater than

(i) 10 TPY of PM-10

(ii) 10 TPY of sulfur dioxide;

(iii) 10 TPY of nitrogen oxides; [OR]

(iv) 100 TPY of carbon monoxide for a stationary source within 10 kilometers of a carbon monoxide nonattainment area**; or** [.]

(v) 10 TPY of direct PM-2.5 emissions.

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18 AAC 50.502 is amended by adding a new subsection to read:

(i) For the purposes of this section, fugitive emissions shall not be included for determining if a minor permit is required, unless the source belongs to any of the stationary source categories listed in 40 C.F.R. Part 51.165(a)(1)(iv)(C), adopted by reference in 18 AAC 50.040(i).

(Eff. 10/1/2004, Register 171; am 12/1/2004, Register 172; am 12/3/2005, Register 176; am 7/25/2008, Register 187; am 12/9/2010, Register 196; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.120 AS 46.14.170
AS 46.14.010 AS 46.14.130 AS 46.14.180
AS 46.14.020 AS 46.14.140

18 AAC 50.540(c)(2)(B) is amended to read:

(B) sulfur dioxide, **PM-2.5** [PM-10], and nitrogen dioxide for a portable oil and gas operation;

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18 AAC 50.540(d) is amended to read:

(d) **Carbon monoxide source or modification.** For construction that would increase carbon monoxide emissions by 100 TPY or more within 10 kilometers of a **carbon monoxide** nonattainment area, an application must include a demonstration that the potential to emit carbon monoxide emissions from construction and operation of the stationary source or emissions increase from the modification will not cause or contribute to a violation of the ambient air quality **standards** [STANDARD] for carbon monoxide.

(Eff. 10/1/2004, Register 171; am 12/1/2004, Register 172; am 12/3/2005, Register 176; am 7/25/2008, Register 187; am 12/9/2010, Register 196; am 12/9/2010, Register 196; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.120 AS 46.14.170
AS 46.14.010 AS 46.14.130 AS 46.14.180
AS 46.14.020 AS 46.14.140

18 AAC 50.542(c)(2) is amended to read:

(2) is considered to show compliance with the ambient air quality standard for an air pollutant and averaging period if

(A) for a new stationary source or modification, the predicted ambient air concentration from the stationary source, excluding offsite or background contributions, does not exceed **50 percent of the ambient standard for PM-2.5, 67 percent** [2/3] of **the** [EACH] ambient standard for PM-10, or 80 percent of **the** [EACH] ambient standard for sulfur dioxide or nitrogen oxides;

(B) for a modification, the predicted concentration resulting from the **proposal** [INCREASE] is less than the significant impact **level** [LEVELS] in Table 5 of 18 AAC 50.215(d); [OR]

(C) for a modification, if the owner or operator has completed a previous ambient analysis that adequately characterizes the stationary source as it existed before the modification and, the sum of the highest ambient air concentration from the previous analysis plus the highest predicted ambient air concentration resulting from the increase is less than the concentration described in (A) of this paragraph[.]**; or**

(D) for a modification, if the owner or operator has completed a previous ambient analysis that adequately characterizes the stationary source as it existed before the modification and, the sum of the highest ambient air concentration from the previous analysis plus the previous background concentration plus the highest predicted ambient air concentration resulting from the increase is less than the ambient air quality standard in 18 AAC 50.010.

(Eff. 10/1/2004, Register 171; am 12/1/2004, Register 172; am 7/25/2008, Register 187; am 12/9/2010, Register 196; am ___/___/___, Register ___)

Authority: AS 46.03.020 AS 46.14.120 AS 46.14.170
AS 46.14.010 AS 46.14.130 AS 46.14.180
AS 46.14.020 AS 46.14.140 AS 46.14.200