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**OFFICE OF THE LIEUTENANT GOVERNOR
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MEMORANDUM

TO: Gary Mendivil, AAC Contact
Department of Environmental Conservation

FROM: Scott Meriwether
Special Assistant
907.465.4081

A handwritten signature in black ink, appearing to be "SM", followed by a horizontal line.

DATE: December 6, 2012

RE: Filed Permanent Regulations: Department of Environmental Conservation

Regulations re: update to ambient air quality standards: 18 AAC 50.010(5); 18 AAC 50.020; 18 AAC 50.035(b)(1); 18 AAC 50.040(h), (i); 18 AAC 50.215(b)(2), (d); 18 AAC 50.502(c), (i); 18 AAC 50.540(c), (d), (l); 18 AAC 50.542(c)(2)

Attorney General File:	JU2011200663 (Part 2)
Regulation Filed:	12/5/2012
Effective Date:	1/4/2013
Print:	205, April 2013

cc with enclosures:

Linda Miller, Department of Law
Kristen Peterson, Administrative Regulation Review Committee
Judy Herndon, LexisNexis

JU2011200663 (Part 2)

ORDER ADOPTING CHANGES TO REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The attached eighteen pages of regulations, dealing with the Air Quality Control, including One-Hour NO₂ Standards is hereby adopted and certified to be a correct copy of the regulation changes that the Department of Environmental Conservation adopts under the authority of AS 46.03 and AS 46.14 and after compliance with the Administrative Procedure Act (AS 44.62), specifically including notice under AS 44.62.190 and 44.62.200 and opportunity for public comment under AS 44.62.210.

This action is not expected to require an increased appropriation.

In considering the public comments, the Department of Environmental Conservation paid special attention to the cost to private persons of the regulatory action being taken. The Department of Environmental Conservation also gave special attention to alternate practical methods in this regulatory action, as required by AS 46.03.024.

The regulation changes adopted under this order take effect on the 30th day after they have been filed by the lieutenant governor as provided in AS 44.62.180.

DATE: November 9, 2012
Anchorage, Alaska

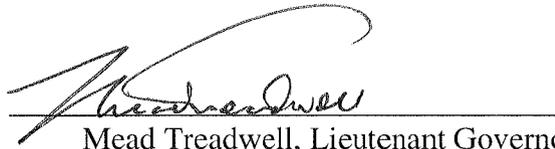


Larry Hartig, Commissioner
Department of Environmental Conservation

FILING CERTIFICATION

I, Mead Treadwell, Lieutenant Governor for the State of Alaska, certify that on

December 5, 2012, at 12:40 p.m., I filed the attached regulations according to the provisions of AS 44.62.040 – 44.62.120.



Mead Treadwell, Lieutenant Governor

Effective: January 4, 2013

Register: 205, April 2013

18 AAC 50.010(5) is amended to read:

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

(A) annual average nitrogen dioxide concentration [ARITHMETIC MEAN] 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 1/4/2013, Register 205)

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

18 AAC 50.020(a) is amended to read:

(a) In an area designated nonattainment in 18 AAC 50.015(b), the provisions of this section do not apply to the nonattainment air pollutant. However, this section does apply to all other air pollutants listed in Table 2 in this subsection.

Table 2.

Baseline Areas and Dates

<u>Baseline Area</u> [AIR QUALITY CONTROL REGION]	Air Pollutant	<u>Minor Source</u> Baseline Date
Cook Inlet Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	October 12, 1979
	PM-10	March 20, 1982
	<u>PM-2.5</u>	<u>September 14, 2012</u>
Northern Alaska Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	June 1, 1979
	PM-10	November 13, 1978

	<u>PM-2.5</u>	<u>To be established under 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h)</u>
South Central Alaska Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	October 26, 1979
	PM-10	October 26, 1979
	<u>PM-2.5</u>	<u>To be established under 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h)</u>
Southeast Alaska Intrastate Air Quality Control Region	Nitrogen dioxide	February 8, 1988
	Sulfur dioxide	November 10, 1986

<p>PM-10</p>	<p><u>To be established under 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h)</u> [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.]</p>
<p><u>PM-2.5</u></p>	<p><u>To be established under 40 C.F.R. 52.21(b)(14)(ii), adopted by reference in 18 AAC 50.040(h)</u></p>

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) a concentration may not exceed the ambient air quality standard described in 18 AAC 50.010 for that pollutant.

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

CLASS II	Sulfur dioxide: Annual arithmetic mean 2 24-hour maximum 5 3-hour maximum 25	
	Nitrogen dioxide: Annual arithmetic mean 2.5	
	<u>PM-2.5:</u> <u>Annual arithmetic mean 1</u> <u>24-hour maximum 2</u>	
	PM-10: Annual arithmetic mean 17 24-hour maximum 30	
	Sulfur dioxide: Annual arithmetic mean 20 24-hour maximum 91 3-hour maximum 512	

	Nitrogen dioxide: Annual arithmetic mean 25
	<u>PM-2.5:</u> <u>Annual arithmetic mean 4</u> <u>24-hour maximum 9</u>
	PM-10: Annual arithmetic mean 34 24-hour maximum 60
	Sulfur dioxide: Annual arithmetic mean 40 24-hour maximum 182 3-hour maximum 700
CLASS III	Nitrogen dioxide: Annual arithmetic mean 50

	<u>PM-2.5:</u>	
	<u>Annual arithmetic mean</u>	<u>..... 8</u>
	<u>24-hour maximum</u>	<u>..... 18</u>

18 AAC 50.020(e) is amended to read:

(e) For purposes of this section, the baseline **concentrations within a baseline area are determined in accordance with 40 C.F.R. 52.21(b)(13), adopted by reference in 18 AAC 50.040(h)** [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].

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

(g) For purposes of this section, the baseline area is every part of an air quality control region described in 18 AAC 50.015 that is designated as attainment or unclassifiable, and 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:

(1) equal to or greater than one microgram per cubic meter on an annual average basis for sulfur dioxide, nitrogen dioxide, or PM-10;

(2) equal to or greater than 0.3 micrograms per cubic meter on an annual average basis for PM-2.5. (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 1/4/2013, Register 205)

Authority: AS 46.03.020 AS 46.14.010 AS 46.14.030

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

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9/17/2011, Register 199; am 4/8/2012, Register 202; am 9/14/2012, Register 203; am
1/4/2013, Register 205)

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:

...

18 AAC 50.040(h)(4)(B)(vi) is repealed:

(vi) repealed 1/4/2013;

18 AAC 50.040(h)(4) is amended by adding a new subparagraph 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).

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

(5) repealed 1/4/2013;

18 AAC 50.040(i)(1)(A) is amended to read:

(A) the following provision are not adopted, and the terms defined in those provisions have the meanings given in AS 46.14.990:

(i) 40 C.F.R. 51.165(a)(1)(i) ("stationary source");

(ii) **40 C.F.R. 51.165(a)(1)(ii)** [40 C.F.R. 52.165(a)(1)(ii)]
("building, structure, facility, or installation");

(iii) **40 C.F.R. 51.165(a)(1)(iii)** [40 C.F.R. 52.165(a)(1)(iii)]
("potential to emit");

(iv) **40 C.F.R. 51.165(a)(1)(vii)** [40 C.F.R. 52.165(a)(1)(iv)]
("emissions unit");

(v) **40 C.F.R. 51.165(a)(1)(xviii)** [40 C.F.R. 52.165(a)(1)(ix)]
("FUGITIVE EMISSIONS");

(vi) 40 C.F.R. 52.165(a)(1)(xviii)] ("construction");

18 AAC 50.040(i)(1)(B)(i) is amended to read:

(i) **40 C.F.R. 51.165(a)(1)(xxxvii)** [40 C.F.R.
52.165(a)(1)(xxxvii)] ("regulated NSR pollutant");

18 AAC 50.040(i)(1)(B)(ii) is amended to read:

(ii) **40 C.F.R. 51.165(a)(1)(xxxviii)** [40 C.F.R.
52.165(a)(1)(xxxviii)] ("reviewing authority");

(Eff. 1/18/97, Register 141; am 6/14/98, Register 146; am 6/21/98, Register 146; am 7/2/2000,

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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 9/14/2012, Register 203; am 1/4/2013, Register 205)

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].

18 AAC 50.215(d) is amended to read:

(d) Table 5 establishes the significant impact level, 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. A person shall conduct the comparison of a modeled impact to the significant impact level as follows:

(1) for the 24-hour PM-2.5 significant impact level, **the annual average PM-2.5 significant impact level, the one-hour nitrogen dioxide significant impact level,** or [FOR] the one-hour sulfur dioxide significant impact level, the person shall compare

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

(B) the highest multi-year average concentration when using a **multi-year** [MULTIYEAR] meteorological data set; [AND]

(2) for **all** [AN] other pollutants and averaging periods, the person shall 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	1.0	N/A	N/A	N/A	8 [N/A]

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dioxide					
Carbon monoxide	N/A	N/A	500	N/A	2,000

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

(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, [I] Register 193; am 10/29/2010, Register 196; 9/17/2011, Register 199; am 9/14/2012, Register 203; am 1/4/2013, Register 205)

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;**

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 1/4/2013, Register 205)

18 AAC 50.502(c)(1) is amended by adding a new subparagraph to read:

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

18 AAC 50.502(c)(3)(A) is amended by adding a new sub-subparagraph to read:

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

18 AAC 50.502(c)(3)(B) is amended by adding a new sub-subparagraph to read:

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

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

(i) For purposes of this section, fugitive emissions will 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. 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 1 / 4 / 2013, Register 205)

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	

The lead-in language of 18 AAC 50.540(c)(2) is amended to read:

(2) for a permit for construction, modification, or relocation of a stationary source, a demonstration in accordance with 18 AAC 50.215(b) - (e) that the proposed potential

emissions from the stationary source will not interfere with the attainment or maintenance of the ambient air quality standards, **except as provided under (l) of this section**; the ambient demonstration must follow an approved modeling protocol if the department requests a modeling protocol for demonstrating compliance with ambient air quality standards; unless the department has made a finding in writing that the stationary source or modification does not need an ambient analysis to determine that construction and operation will not result in a violation of an ambient air quality standard, the application must include an ambient analysis for

...

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

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

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.

18 AAC 50.540 is amended by adding a new subsection to read:

(l) **One-hour nitrogen dioxide exemption.** A permit applicant is not required to demonstrate compliance with the one-hour nitrogen dioxide standard in 18 AAC 50.010(5)(B), unless the department finds that the emissions have a reasonable likelihood of causing or significantly contributing to ambient concentrations that exceed the one-hour nitrogen dioxide standard, and makes a written request for a demonstration. (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 9/14/2012, Register 203; am 1/4/2013, Register 205)

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 each ambient standard for PM-2.5, 67 percent** [2/3] of **the** [EACH] ambient standard for PM-10, or 80 percent of each ambient standard for sulfur dioxide or nitrogen **dioxide** [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 1/4/2013, Register 205)

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