

Description of the Proposed Changes to 18 AAC 50

March 2, 2012

Section	Discussion
18 AAC 50.010	Added federal 1-hour nitrogen dioxide (NO ₂) ambient air quality standard.
	Revised language regarding annual average standard to better match the federal wording.
18 AAC 50.020	Added federal 24-hour and annual average fine particulate matter (PM-2.5) maximum allowable increase (increment).
	Revised the language to better match the federal wording. However, used Alaska-specific language, as needed, in regards to the Alaska ambient air quality standards, the Alaskan air quality control regions, and Alaska-specific regulatory citations.
	Improved the interface between 18 AAC 50.020 and 040 in regards to increments by: <ul style="list-style-type: none"> • Adding a new subsection which contains the “ambient air ceiling” provisions. The federal “ambient air ceiling” language was previously adopted by reference in 18 AAC 50.040(h), but was never referred to in 18 AAC 50.020. Moving the provision to 18 AAC 50.020 provides a clear reference to this previously implied limitation and also allows the Department to refer to the Alaska air quality standards rather than the federal air quality standards. • Replacing the current language regarding baseline concentrations with a reference to the federal provisions adopted by reference in 18 AAC 50.040(h)(4). This approach automatically pulls in the new PM-2.5 provisions in 40 CFR 52.21. It also provides consistency between 18 AAC 50.020 and 040, which was previously lacking. • Adding a new paragraph that describes “baseline area” This term was previously adopted by reference in 18 AAC 50.040(h), but the adoption did not provide a cross-link to the air quality control regions listed 18 AAC 50.015.
18 AAC 50.030	Revised adoption date of the state air quality control plan so that the changes can be forwarded to the U.S. Environmental Protection Agency (EPA) for subsequent processing as a state implementation plan (SIP) submittal.
18 AAC 50.035(b)(1)	Added the adoption by reference of 40 CFR 50, Appendix S.
18 AAC 50.040(h)	Revised adoption date in order to incorporate EPA’s Prevention of Significant Deterioration (PSD) significant monitoring concentration for PM-2.5 and Class I significant impact levels (SILs) for PM-2.5.
	Revised/repealed the following subparts to improve the interface with the increment provisions in 18 AAC 50.020: <ul style="list-style-type: none"> • Added a new paragraph (4)(D) that references the “baseline area” definition in 18 AAC 50.020(g) rather than 40 CFR 52.21(b)(15). • Repealed (h)(5) since the “ambient air ceiling” provisions in 40 CFR 52.21(d) are now described in 18 AAC 50.020(b)(5).
18 AAC 50.215(b)(2)	Changed the reference to 18 AAC 50.020 instead of 18 AAC 50.020(b)(2) since the methodology for calculating increments entails all of 18 AAC 50.020, not just the provisions in (b)(2).
	Replaced the increment exclusion for sources located outside of the United States with a reference to the broader exclusions in the federal PSD rules adopted by reference in 18 AAC 50.040. The broader exclusions were previously pointed to in

	18 AAC 50.306, but not 18 AAC 50.215(b)(2).
18 AAC 50.215(d)	Except as noted below, maintained the previously proposed changes to the general SIL language since that language has not yet been finalized.
	Included the specific averaging periods for the PM-2.5 SILs to enhance clarity. This also effectively corrects a typographical error in the previously proposed change. The phrase “PM-2.5 SIL” should have been plural (“PM-2.5 SILs” – <i>emphasis added</i>).
	Added EPA’s interim SIL for the 1-hour NO ₂ standard.
18 AAC 50.306(b)(2)	Replaced the previous wording regarding increment exclusions with a reference to the increment exclusions listed in 18 AAC 50.215(b). This provides automatic consistency between Articles 2 and 3 (which was previously lacking).
18 AAC 50.502(c)(1)	Added an emissions threshold for new PM-2.5 stationary sources. Used EPA’s PSD significant emission rate (SER) of 10 tons per year (tpy) since the emission thresholds for the other pollutants also match the PSD SER. However, only included EPA’s direct emission threshold. Did <i>not</i> include EPA’s precursor thresholds for PM-2.5 since the minor permit thresholds in 18 AAC 50.502(c) are essentially used to trigger a modeling review, and EPA has not yet developed an adequate new source review (NSR) model for estimating PM-2.5 impacts from precursor emissions.
18 AAC 50.502(c)(3)	Added emission thresholds for existing PM-2.5 stationary sources. To maintain consistency, used the same 10 tpy value as currently used for particulate matter with an aerodynamic diameter of no more than 10 microns (PM-10), sulfur dioxide (SO ₂) and nitrogen oxides.
18 AAC 50.502(i)	Added a new section to codify the Department’s practice of exempting fugitive emissions from being used to determine minor permit applicability, unless the stationary source is included in 40 CFR 52.21(b)(1)(iii), adopted by reference in 18 AAC 50.040(h)(4).
18 AAC 50.540(c)(2)(B)	Replaced the requirement to model PM-10 impacts from portable oil and gas operations with a requirement to model PM-2.5 impacts instead. Since most particulate emissions from combustion units are in the PM-2.5 range and the PM-2.5 standard is much tighter than the PM-10 standard, there is no need to model both types of particulates.
18 AAC 50.540(d)	Clarified that the carbon monoxide threshold only pertains to sources located with 10 kilometers of a <i>carbon monoxide</i> nonattainment area.
18 AAC 50.542(c)(2)	<p>Made the following changes.</p> <ul style="list-style-type: none"> • Added a demonstration threshold for PM-2.5. Assumed the existing 24-hour average concentration in areas where fast-track is allowed is 18 µg/m³, which is essentially half of the 35 µg/m³ air quality standard. The basis for the 18 µg/m³ value is described in the November 30, 2010 internal guidance document “General Concepts to Consider When Reviewing a PM-2.5 Modeling Assessment Submitted in Support of a Permit Application,” posted on the Department’s web-site at: http://dec.alaska.gov/air/ap/modeling.htm. • Made minor editorial changes. • Clarified that the sum of the projected and existing impacts (<i>with background</i>), can be compared to the ambient air quality standard rather than the demonstration threshold.