



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

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OFFICE OF  
AIR AND WASTE

**NOV 13 2017**

Ms. Barbara Trost  
Air and Water Quality Division  
Alaska Department of Environmental Conservation  
555 Cordova Street  
Anchorage, Alaska 99501-2617

Dear Ms. Trost:

The EPA Region 10 office of the U.S. Environmental Protection Agency (EPA Region 10) evaluated the Alaska Department of Environmental Conservation (ADEC) 2016 Annual Monitoring Network Plan (ANP) received on April 13, 2017. This approval letter documents EPA Region 10's findings from the review of this ANP and identifies instances in which Alaska's monitoring network did not satisfy federal requirements, as well as suggested steps that can be taken to address the issues identified.

The following monitoring network deficiencies should be addressed as soon as possible:

1. With a submittal date of April 13, 2017, ADEC did not meet the regulatory requirement (40 CFR 58.10) for submission of the 2016 Annual Network Plan by the July 1, 2016 deadline. Additionally, the lateness of the 2016 Annual Network Plan submittal also resulted in a delay in the submittal of the ADEC 2017 Annual Monitoring Network Plan past the July 1, 2017 regulatory deadline.

The EPA Region 10 is aware that the 2016 ANP was delayed due to discussions regarding the regulatory applicability of the Federal Equivalent Method (FEM) Beta Attenuation Monitor (BAM) 1020 monitoring network in Fairbanks, Alaska. However, timely submittals of ANPs are required to ensure regulatory decisions based on data that reside in the EPA Air Quality System (AQS) database are supported by adequate and representative ambient air monitoring networks.

2. ADEC requested to discontinue the PM<sub>10</sub> monitor in Juneau and utilize data from a PM<sub>2.5</sub> monitor as a surrogate for PM<sub>10</sub> data. As we recently discussed with you, ADEC will need to submit a SIP revision to change the requirements in the Juneau PM<sub>10</sub> maintenance plan. We will act on the request to remove the PM<sub>10</sub> monitor in Juneau at that time.
3. The Anchorage Metropolitan Statistical Area (MSA) does not have an approved State or Local Air Monitoring Station (SLAMS) ozone monitoring network as required by Section 4.1 of 40 CFR Part 58, Appendix D. Site relocations of the current ozone Special Purpose Monitor (SPM) operated by ADEC have led to an invalid 2014 - 2016 ozone design value for the Anchorage MSA due to insufficient data collection. To be eligible for SLAMS approval, the monitoring network must include monitoring in the location of expected maximum ozone concentrations and

we recommend considering the EPA site selection guidance, “*Guideline on Ozone Monitoring Site Selection*” (August, 1998) for determining the location of the ozone monitoring site.

If ADEC does not think that ozone monitoring is warranted in the Anchorage MSA based on historical monitoring results for this MSA, ADEC can request a waiver from ozone monitoring in the Anchorage MSA pursuant to Section 4.1(b) of 40 CFR Part 58, Appendix D.

4. While the EPA Region 10 is aware that ADEC has concerns regarding using the BAM 1020 monitor measurements for regulatory decision making in Fairbanks, ADEC has not officially requested and supplied an analysis demonstrating that the PM<sub>2.5</sub> BAM measurements do not meet Class III FEM requirements. Section 3.5 of the 2016 Annual Monitoring Network Plan states that all Alaskan BAM PM<sub>2.5</sub> monitoring stations do meet FEM data quality requirements beginning in 2016. For the NCore monitoring station (AQS ID: 02-090-0034), ADEC reports that FEM data quality requirements were achieved as early as 2014 for the BAM PM<sub>2.5</sub> monitor.

While the 2016 ANP states that these monitors meet FEM data quality requirements, regulatory PM<sub>2.5</sub> measurement data from this BAM PM<sub>2.5</sub> network remains unreported by ADEC to the AQS regulatory parameter code for PM<sub>2.5</sub> (88101). Additionally, ADEC has not met regulatory data reporting requirements for submitting its FEM data to AQS. See e.g., 40 CFR 58.11(e) and 58.16(a). Because of these issues, the EPA Region 10’s approval of the BAM PM<sub>2.5</sub> ambient air monitoring network in Fairbanks is contingent upon completion of the following:

- a. ADEC reports the 2014 to present NCore (AQS ID: 02-090-0034) BAM PM<sub>2.5</sub> monitoring measurements to AQS as regulatory data. To report this data to AQS as regulatory data, ADEC must submit the data using the “88101” AQS parameter code.
- b. ADEC reports all BAM PM<sub>2.5</sub> measurements in Fairbanks from 2016 to present to AQS as regulatory data using the “88101” AQS parameter code.

As an alternative to reporting the Fairbanks BAM 1020 monitor data to AQS as regulatory data, ADEC may formally request that the BAM 1020 monitor measurements not be used for regulatory decision making purposes by demonstrating that Class III FEM criteria have not been achieved. If ADEC decides to formally request that these BAM 1020 monitor measurements not be used for regulatory decision making purposes, EPA Region 10 requests that ADEC’s analysis and demonstration be provided to EPA Region 10 within 30 days from the date of this correspondence. In the absence of this demonstration, ADEC should complete migrating the FEM BAMs data to the 88101-regulatory parameter code within this 30 day timeframe.

The EPA Region 10 notes the following ANP deficiencies and recommends they be addressed in next year’s ANP submission:

5. The ANP does not summarize ambient air monitoring networks by MSA, CBSA, CSA as required by 40 CFR 58.10(b)(8). Minimum monitoring requirements cannot be evaluated without both CBSA populations and current design values.
6. The ANP does not provide a statement of purpose for each SPM monitor as required by 40 CFR 58.20(a). The EPA Region 10 recommends that a statement of purpose exist for all monitors in the Alaskan ambient air monitoring network. However, a statement of purpose is required for all monitors designated as SPMs.

7. The ANP does not provide sufficient detail to determine if the 30-day public comment period for the Plan was met. The ANP did not include public comments received by ADEC nor how ADEC addressed the public comments as required by 40 CFR 58.10(a)(1). If no comments were received during the public comment period, please state so.
8. Scales of Representativeness were not defined in the ANP for SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, or NO<sub>y</sub> monitoring networks (NCore sites) as required by 40 CFR 58.10(b)(6).
9. Scales of Representativeness for PM were not always consistent with 40 CFR Part 58, Appendix E requirements for PM monitors sited near roadways. ADEC's cover letter to the EPA Region 10 for the 2016 ANP addressed some of these issues, but the narrative in the 2016 ANP was not updated to reflect these justifications. Please ensure that ANPs provide more detail and explanation of the predominant air pollutant sources that determine the monitoring scale, especially when the monitoring scales in the ANP do not match Figure E-1 of 40 CFR Part 58, Appendix E.
10. EPA Region 10 recommends that ADEC update the explanation of its monitoring objectives for the monitors included in the ANP (as required by 40 CFR 58.10(b)(6)) to clarify which 40 CFR Part 58, Appendix D monitoring objectives are met for the required monitors. The EPA Region 10 also recommends that ADEC use monitoring objective definitions consistent with those identified in 40 CFR Part 58, Appendix D, 1.1.1 (a-f).

Except for the deficiencies discussed above, the EPA Region 10 approves the Alaska 2016 ANP. If you have any questions about our approval of the Alaska 2016 Annual Monitoring Network Plan, please contact Doug Jager at (206) 553-2961.

Sincerely,



Tim Hamlin, Director  
Office of Air and Waste