



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

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Seattle, WA 98101-3140

AUG - 2 2018



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

Dear Ms. Trost:

The U.S. Environmental Protection Agency, Region 10 evaluated the Alaska Department of Environmental Conservation's 2017 Annual Monitoring Network Plan received on April 5, 2018. With a submittal date of April 5, 2018, ADEC did not meet the July 1, 2017, submittal deadline for the 2017 ANP. Region 10 is aware that the 2017 ANP was delayed due to ongoing multi-year discussions regarding the regulatory applicability of the Beta Attenuation Monitor (BAM-1020) monitoring network in Fairbanks, Alaska. Region 10 does not anticipate that this issue will affect future ANP submissions. This approval letter documents Region 10's findings from the review of this ANP.

Based on our review of the ANP, we identified the following monitoring network deficiency. ADEC is aware of this issue and has already resolved the issue for the CY 2018 Network:

1. Collocation requirements for the PM<sub>2.5</sub> Federal Reference Method network (40 CFR Part 58 Appendix A §3.2.3.1 and §3.2.3.2) were not met during CY 2017. ADEC and Region 10 have worked to resolve this issue for the CY 2018 FRM network. An additional FRM sampler was purchased to meet collocation requirements for this network.

Region 10 recommends that the ANP summarize the PM<sub>2.5</sub> and PM<sub>10</sub> monitoring methods that are deployed in Alaska's Primary Quality Assurance Organization and show which PM monitoring stations are used to meet collocation requirements. As an example, collocation requirements are met for the continuous PM<sub>2.5</sub> BAM-1020 Federal Equivalent Method in the Alaskan PQAO at the Juneau monitoring site where a PM<sub>2.5</sub> FEM BAM-1020 is collocated with a Thermo 2000i PM<sub>2.5</sub> FRM sampler.

Region 10 notes the following ANP deficiencies and recommends ADEC address these in the 2019 ANP submission:

2. The most recent US Census population estimates should be used when assessing monitoring requirements for Metropolitan Statistical Areas. The population figures provided in Table 3-3-1 on page 12 of the ANP appear to be based on the 2010 MSA populations and not the more representative 2016 or 2017 population estimates.
3. Based on the 2016 PM<sub>2.5</sub> Design Value of 36 ug/m<sup>3</sup> and a 2016 population of 402,557 for the MSA, Anchorage is required to operate at least 1 PM<sub>2.5</sub> monitor per Table D-5 of 40 CFR Part 58

Appendix D. While the next ANP should be modified to address the required monitoring for the Anchorage MSA, ADEC currently operates a PM<sub>2.5</sub> network in Anchorage that exceeds the minimum requirements specified in 40 CFR Part 58 Appendix D. Page 13 of the ANP incorrectly states that there is not a regulatory PM<sub>2.5</sub> requirement for the Anchorage MSA.

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4. Page 22 lists the NCore BAM-1020 reporting data to the regulatory parameter code '88101' using AQS method code '170'. Page 24 correctly lists the North Pole Fire Station PM<sub>2.5</sub> monitor reporting to the non-regulatory parameter codes of '88501' and '88502', but incorrectly lists the method code as '170' when it should be the non-regulatory AQS method code '731'. ADEC and Region 10 agree that the BAM measurements should not be used for regulatory decision making, and these edits to the tables for the 2019 ANP would make this clearer.
  5. Table 3-4 on page 16 for PM monitoring sites should be either two separate tables to address PM<sub>10</sub> and PM<sub>2.5</sub> monitoring separately, or alternatively, an additional column should be added to the existing table to make this differentiation. The monitoring scales for PM<sub>10</sub> and PM<sub>2.5</sub> can be different at the same site due to differences in area wide sources. An example is Butte where the Butte measurement scale for PM<sub>2.5</sub> is Neighborhood and the sources are from local home heating wood combustion. However, the PM<sub>10</sub> measurements at Butte are indicative of a broader scale air quality issue driven by windblown dust out of the Matanuska river bed.

Finally, Region 10 notes the following observations from its review of the ANP and provides them for your consideration.

6. Per Region 10's letter to ADEC on March 23, 2018, and consistent with Region 10's approval of past monitoring plans and ADEC's submission of non-regulatory coded data to AQS, Region 10 concluded that the existing data in AQS from the BAM-1020 monitors in the Fairbanks MSA can remain coded as non-regulatory data. However, the performance of the Fairbanks BAM-1020 located at the North Pole Fire Station and NCore monitoring stations have improved in recent years and the improved agreement demonstrates that the BAM-1020 monitors in Fairbanks meet the Class III criteria. Further PM<sub>2.5</sub> measurements performed with FEM configured BAM-1020 equipment will necessitate that the resultant measurements be submitted to AQS using the PM<sub>2.5</sub> regulatory parameter code.
7. Region 10 recommends adding a footnote to Table 3-6 on page 18 to explain why the NO<sub>y</sub> probe height is 4m instead of the 10m recommended by EPA guidance. ADEC has previously informed Region 10 staff that this height was selected to keep the NO<sub>y</sub> measurements beneath the inversion layer. Region 10 agrees with ADEC's rationale for the selection of the 4m height for the NO<sub>y</sub> converter and recommends including the explanation in the ANP.
8. Region 10 suggests describing which monitors are considered primary and members of a primary composite when multiple samplers are collocated at air monitoring stations.
9. Tables 3-10 and 3-11:
  - a. Region 10 recommends that ADEC use monitoring objective definitions consistent with those identified in 40 CFR Part 58, Appendix D, 1.1.1 (a-f). The information currently provided in this column is helpful and should be retained in the ANP, but the ANP would be improved by using a different identifier for the column header other than monitoring objective.

- b. Column "Required due to NAA or Maintenance Plan" appears at times to be a blend of monitoring required by 40 CFR Part 58 Appendix D and those monitors required by Nonattainment Areas or Maintenance Area requirements. Region 10 recommends changing this column to monitors required for meeting Appendix D minimum monitoring requirement and creating a separate table for describing those monitors required for meeting regulatory decision-making needs in Nonattainment and Maintenance Areas. This could also be achieved by having separate columns in the existing table for the Appendix D requirements vs Nonattainment and Maintenance Area requirements.

Region 10 reviewed ADEC's request in the ANP to waive ozone monitoring requirements in the Anchorage MSA. Deviations from the minimum ozone monitoring requirements are allowed pursuant to 40 CFR Part 58 Appendix D 4.1(b). Based on the historical monitoring in multiple portions of the Anchorage MSA, Region 10 concurs with ADEC that the measurement of ambient ozone in the MSA is a low priority compared to other monitoring efforts performed by ADEC. Region 10 grants ADEC the waiver from ambient air ozone monitoring in the Anchorage MSA. Region 10 will send a separate letter documenting approval for ceasing ozone monitoring in the Anchorage MSA and requests that this waiver correspondence and all other waivers from regulatory monitoring requirements be attached as a separate appendix to each ANP.

Except for the deficiencies noted above, Region 10 approves the Alaska 2017 ANP. We appreciate ADEC's efforts to complete the ANP submission requirement, your responsiveness to comments, and the working relationship that we have with you. If you have any questions regarding this correspondence, please contact Doug Jager of my staff at (206) 553-2961.

Sincerely,



Gina Bonifacino  
Acting Manager, Air Planning Unit