



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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AIR & RADIATION
DIVISION

October 27, 2021

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

Dear Ms. Trost:

The U.S. Environmental Protection Agency, Region 10 evaluated the Alaska Department of Environmental Conservation's 2021 Annual Monitoring Network Plan (ANP) dated June 28, 2021. By this letter, Region 10 documents its findings from the review and approves the State of Alaska's 2021 ANP.

Thank you for including details on the following network modifications completed by ADEC in 2020 and 2021:

1. Replacing the PM_{2.5} and PM₁₀ FEM monitors with one T640X Federal Equivalent Method (FEM) monitor at the Floyd Dryden station (AQS ID: 02-110-0004) in Juneau. ADEC made this replacement in June of 2021, establishing the T640X as the primary monitor. Adding a new PM_{2.5} FEM type monitor to the monitoring network triggers additional collocation requirements: each unique PM_{2.5} FEM monitor type is required to have at least one monitor collocated with a PM_{2.5} Federal Reference Method (FRM) monitor per 40 CFR Part 58 App A, Section 3.2.3. This requirement does not apply to PM₁₀ FEM monitors per 40 CFR Part 58 Appendix A, Section 3.3.4. ADEC established a collocated FRM on September 29, 2021. The site now meets minimum monitoring requirements for PM_{2.5} and PM₁₀ and is on track to meet requirements for the minimum number of collocated samples. Prior to the 2022 ANP, ADEC and R10 will assess the performance of the T640X FEM in comparison to the FRM. Additionally, please provide written notification to Region 10 when planned changes to SLAMS primary monitors are identified in the future per 40 CFR Part 58.14(b).
2. Upgrading gaseous pollutant monitors at the NCore Site (AQS-ID: 02-090-0034). Thank you for including information on the upgraded CO, NO_y/NO, O₃, and SO₂ instruments, as well as the new CO calibrator.
3. Deploying a network of thirteen to eighteen low-cost AQ-Mesh sensors to rural hubs. We appreciate the proactive work ADEC is doing to expand air monitoring coverage in the state. Please keep us updated on the status of air quality monitoring in this sensor network.

The source-oriented lead (Pb) monitoring waiver request for Red Dog Mine is currently under review. Region 10 will make a determination on the waiver request in a separate letter. Per 40 CFR Part 58 Appendix D, Section 4.5(a), there must be one source-oriented SLAMS site to measure the maximum ambient Pb concentrations from each source which emits more than 0.5 tons per year. The most recent National Emissions Inventory (NEI) is used to determine which sources emit above the 0.5 tons per year threshold. ADEC received a 5-year waiver to conduct source-oriented Pb monitoring at Red Dog Mine

in 2016 per 40 CFR Part 58 Appendix D, Section 4.5(c)(ii). ADEC submitted a request to renew this waiver in 2020. EPA requested additional analysis upon review of the waiver modeling analysis. ADEC provided the updated analysis and documentation on October 4, 2021 and will be providing an updated waiver request soon.

Alaska's 2021 ANP did not include any proposed network modifications that require EPA approval. We appreciate the inclusion of plans to establish a replacement site for the Butte Harrison Ct. station (AQS-ID: 02-170-0008). Monitoring at this site includes PM_{2.5} (SLAMS) and PM₁₀ (SPM). EPA staff met with ADEC staff earlier this year to discuss the saturation study, and we agree on ADEC's selection of the Butte Elementary School Site and the Alaska Plant Materials Center Site for further investigation. Your plan of conducting parallel monitoring for 12 months will improve confidence in establishing a replacement site that characterizes expected maximum PM_{2.5} concentration. Please notify us of any updates related to establishing a replacement site for the Butte monitoring site.

We did not identify any part of Alaska's ambient air monitoring network that does not meet the minimum monitoring requirements set out in 40 CFR Part 58. The enclosed Annual Monitoring Network Plan Checklist is the checklist EPA used to review your plan for overall items that are required to be included in the ANP along with our assessment of whether the plan submitted by your agency addresses those requirements. We have also enclosed checklists for use in future ANP submissions to show compliance with the requirements of 40 CFR Part 58 appendices A, B, and C.

All comments conveyed via this letter and the enclosed checklist should be addressed in next year's annual monitoring network plan via corrections or addition of information to the plan. Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 10 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices.

Region 10 approves the State of Alaska's 2021 ANP. We appreciate the timeliness of the ANP submission and all the work ADEC does to protect the quality of Alaska's air, especially your proactive work to establish low-cost sensor hub sites. We look forward to our continued collaboration. If you have any questions about our approval of the ANP, please contact me at (206) 553-0985 or Sarah Waldo at (206) 553-1504.

Sincerely,

Debra Suzuki, Manager
Air Planning, State/Tribal Coordination Branch

Enclosures:

Appendix I: Annual Monitoring Network Plan Checklist

Appendix II:

Appendix I: Region 10 ANNUAL AIR MONITORING NETWORK PLAN CHECKLIST

Year: 2021

Agency: Alaska Department of Environmental Conservation (ADEC)

40 CFR 58.10(a)(1) requires that each Annual Network Plan (ANP) include information regarding the following types of monitors: SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations.

40 CFR 58.10(a)(1) further directs that, "The plan shall include a statement of purposes for each monitor and evidence that siting and operation of each monitor meets the requirements of appendices A, C, D, and E of this part, where applicable." On this basis, review of the ANPs is based on the requirements listed in 58.10 along with those in Appendices A, C, D, and E.

EPA Region 10 will not take action to approve or disapprove any item for which Part 58 grants approval authority to the Administrator rather than the Regional Administrators, but we will do a check to see if the required information is included and correct. The items requiring approval by the Administrator are: PAMS, NCore, and Speciation (STN/CSN).

Please note that this checklist summarizes many of the requirements of 40 CFR Part 58, but does not substitute for those requirements, nor do its contents provide a binding determination of compliance with those requirements. The checklist is subject to revision in the future and we welcome comments on its contents and structure.

Key:

Highlight Color:	Meaning:
White/no highlight	meets the requirement
Yellow	requirement is not met, or information is insufficient to make a determination. Action requested in next year's plan or outside the ANP process.
Turquoise	item requires attention to improve next year's plan

	ANP requirement	Citation within 40 CFR 58 ¹	Was the information submitted? ² If yes, section or page #s.	Does the information provided ³ meet the requirement? ⁴	Notes
GENERAL PLAN REQUIREMENTS					
1.	Submit plan by July 1 st	58.10 (a)(1)	Y	Y	Submitted June 28 th
2.	30-day public comment / inspection period	58.10 (a)(1); 58.10 (c)	Y	Y	The submission material includes the notice of request for comments; no comments were received
3.	Statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E, where applicable	58.10 (a)(1)	Y; Appendices	Insufficient to judge	I could not find statements that the QA requirements of App's A & B were met. Please add this to next year's ANP. App A-C checklist forms are provided as an attachment.
4.	Modifications to SLAMS network – case when we are not approving system modifications	58.10 (a)(2); 58.10 (b)(5); 58.10 (e); 58.14	N/A		Alaska's 2021 ANP did not include any proposed system modifications for the upcoming 18 months that require EPA approval. .
5.	Modifications to SLAMS network – case when we are approving system modifications per 58.14	58.10 (a)(2); 58.10 (b)(5); 58.10 (e); 58.14	Y; Section 4: Network modifications completed in 2021; Section 5: Planned Network Modifications for 2022	Y	The network changes described in the 2021 ANP include: 1. Replacement of NCore gaseous pollutant analyzers, completed over June 2020 - March 2021 2. Replacement of PM2.5 and PM10 BAM 1020 FEM instruments at Juneau with a Teledyne T640X. The replacement occurred summer 2021 3. Moving the Butte site from Harrison Ct to a new location in 2022 - 2023

¹ Unless otherwise noted.

² Response options: NA (Not Applicable), Yes, No, or Incomplete.

³ Assuming the information is correct.

⁴ Response options: NA (Not Applicable) – [reason], Yes, No, Insufficient to Judge, or Incorrect

					4. Deploying a network of low-cost AQ-Mesh sensors None of these proposed changes require R10 approval at this time.
6.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last ANP approval?	N/A	Incomplete	N	The footnote on Table B-1 indicates the Bethel site was temporarily shut down on June 25, 2020. This was not mentioned in the 2020 ANP. This <i>was</i> mentioned in the 2021 AK PM2.5 Grant Report, but R10 must have missed it. Confirmed with ADEC that the site still does not have power due to COVID restrictions. Ok because this is an SPM site, but please provide up-to-date information in the next ANP.
7.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	Y; Section 5: Planned Network Modifications for 2022	Y	Planning to relocate Butte site. ADEC has capacity/time to run a test site as an SPM in parallel with the Butte site for 12 months before discontinuing Butte. The saturation study was conducted over winter of 20/21, and ADEC presented those results to EPA R10, and two follow-up sites were identified.
8.	Statement that SPMs operating an FRM/FEM/ ARM that meet Appendix E also meet either Appendix A or an approved alternative. Documentation for any Appendix A approved alternative should be included. ⁵	58.11 (a)(2)	N	Incomplete	Please add this to next year's plan. EPA has provided a checklist template for Appendix A.
9.	SPMs operating FRM/FEM/ ARM monitors for over 24 months are listed as comparable to the NAAQS or the agency provided documentation that	58.20 (c)	Y; Tables 3-7, 3-8, 3-9, and 3-10; Table E-1	Improvement from last year's ANP, but still needs clarification	SPMs for PM10 and/or PM2.5 are operated at: Bethel: both PM2.5 and PM10 SPMs. Table 3-10 indicates the PM2.5 SPM

⁵ Alternatives to the requirements of appendix A may be approved for an SPM site as part of the approval of the annual monitoring plan, or separately.

	requirements from Appendices A, C, or E were not met. ⁶				<p>does not comply with requirements b/c it uses a SCC and is non-FEM, but it is not clear why the PM10 BAM is SPM. Unclear why Bethel has all ""NAs"" in Table B-1 or siting requirements. Table B-1 has a footnote indicating that Bethel was temporarily shut down on 6/25/2020. Table E-1 indicates Bethel has data completeness issues.</p> <p>Laurel: PM10 SPM. Followed up with ADEC to confirm it is an SPM because it is a micro-scale site, as per maintenance plan for MOA road dust issues.</p> <p>Butte: Not clear why the PM10 sensor is SPM. Is it because of the siting criteria is not met (Table B-1)? Not sure how the siting waiver plays into this. Follow up from ADEC: it was set up in 1998 as an SPM. We should follow up on this after the re-siting.</p>
10.	For agencies that share monitoring responsibilities in an MSA/CSA: this agency meets full monitoring requirements or an agreement between the affected agencies and the EPA Regional Administrator is in place	App D 2(e)	N/A		ADEC does not share monitoring responsibilities
GENERAL PARTICULATE MONITORING REQUIREMENTS (PM₁₀, PM_{2.5}, Pb-TSP, Pb-PM₁₀)					
11.	Designation of a primary monitor if there is more than one monitor for a pollutant at a site.	App. A 3.2.3	Y; Table 3-17	Y	
12.	Distance between QA collocated monitors. For low volume PM instruments (flow	App. A 3.2.3.4 (c) and 3.3.4.2 (c)	Y, Section 3.2, p 13	Y	In next year's ANP, please clarify that all collocated PM monitors are low-vol

⁶ This requirement only applies to monitors that are eligible for comparison to the NAAQS per 40 CFR §§58.11(e) and 58.30.

	rate < 200 liters/minute) > 1 m. For high volume PM instruments (flow rate > 200 liters/minute) > 2m.				
PM_{2.5} -SPECIFIC MONITORING REQUIREMENTS					
13.	Document how states and local agencies provide for the review of changes to a PM _{2.5} monitoring network that impact the location of a violating PM _{2.5} monitor.	58.10 (c)	N/A		The only change in the PM _{2.5} monitoring network relates to the Butte site, which is not violating.
14.	Identification of any PM _{2.5} FEMs and/or ARMs not eligible to be compared to the NAAQS due to poor comparability to FRM(s) [Note 1: must include required data assessment.] [Note 2: Required SLAMS must monitor PM _{2.5} with <u>NAAQS-comparable</u> monitor at the required sample frequency.]	58.10 (b)(13) 58.11 (e)	Y, Table E1	Y	Table E-1 presents PM _{2.5} design values, with annotation noting if a value is not eligible for comparison with the NAAQS due to data completeness or non-FEM status.
15.	Minimum # of monitoring sites for PM _{2.5} [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D 4.7.1(a) and Table D-5	Y, Table A-1	Y	ADEC's PM _{2.5} monitoring network exceeds the minimum monitoring requirements. In next year's ANP, please consider updating the entries in the fourth column to Table A-1 to be just the number of required SLAMS for a CBSA, omitting the site-specific notes on type of monitor.
16.	Requirements for continuous PM _{2.5} monitoring (number of monitors and collocation)	App. D 4.7.2	Y	N	All MSAs have >1 continuous monitor. In Fairbanks, SCC are used to break the FEM designation. The T640X at the Floyd Dryden site in Juneau did not have a collocated monitor at the time of the ANP submission, but one was deployed in Oct, in time to make up the required collocation samples.
17.	FRM/FEM/ARM PM _{2.5} QA collocation	App. A 3.2.3	Y, Table 3-17	N	See above: not met at the time of the ANP submission, but met now.
18.	PM _{2.5} Chemical Speciation requirements for official STN sites	App. D 4.7.4	Y, Table 3-8	Y	CSN is collocated with NCore

19.	Identification of sites suitable and sites not suitable for comparison to the annual PM _{2.5} NAAQS as described in Part 58.30	58.10 (b)(7)	Y, Table E-1	Y	Table E-1 presents PM _{2.5} design values, with annotation noting if a value is not eligible for comparison with the NAAQS due to data completeness or non-FEM status.
20.	Required PM _{2.5} sites represent area-wide air quality	App. D 4.7.1(b)	Y, Tables 3-11, 3-12, 3-13, 3-14, 3-15	Y	The only required PM _{2.5} site is Fairbanks; table 3-5 indicates it is neighborhood scale for PM _{2.5}
21.	For PM _{2.5} , within each MSA, at least one site at neighborhood or larger scale in an area of expected maximum concentration	App. D 4.7.1(b)(1)	Y, Tables 3-11, 3-12, 3-13, 3-14, 3-15	Y	
22.	If additional SLAMS PM _{2.5} is required, there is a site in an area of poor air quality	App. D 4.7.1(b)(3)	Y, Tables 3-11, 3-12, 3-13, 3-14, 3-15	Y	
23.	States must have at least one PM _{2.5} regional background and one PM _{2.5} regional transport site.	App. D 4.7.3	Y, Table 3-11	Unclear	Which sites are these? Follow up from ADEC: Butte serves as the background and transport site.
24.	Sampling schedule for PM _{2.5} - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4); 58.12(d); App. D 4.7	Y; tables 3-7, 3-8; 3-9; 3-10	Y	All primary FRM are 1:1 (NCore, A-Street, and North Pole)

PM₁₀ -SPECIFIC MONITORING REQUIREMENTS

25.	Minimum # of monitoring sites for PM ₁₀ [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D, 4.6 (a) and Table D-4	Y: Tables 3-2; 3-16; E5	Y	Laurel, Garden, Parkgate/Eagle River, and Butte all measure PM ₁₀ in the Anchorage MSA
26.	Manual PM ₁₀ method collocation (note: continuous PM ₁₀ does not have this requirement)	App. A 3.3.4	Y, Table 3-17	Y	
27.	Sampling schedule for PM ₁₀	58.10 (b)(4); 58.12(e); App. D 4.6	Y; tables 3-7, 3-8, 3-9, 3-10	Y	

Pb -SPECIFIC MONITORING REQUIREMENTS

28.	Minimum # of monitors for non-NCore Pb [Note: Only monitors considered to be	App D 4.5	Y; Section 3.1.1	Y	Waiver for Red Dog Mine expired 8/11/2021. ADEC submitted an
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	required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]				updated waiver request and the approval is ongoing. Thank you for adding the waivers as appendices. Marking this as turquoise because of the ongoing work on the Red Dog Mine waiver renewal.
29.	Pb collocation: for non-NCORE sites	App A 3.4.4 and 3.4.5	N/A	N/A	
30.	Any source-oriented Pb site for which a waiver has been granted by EPA Regional Administrator	58.10 (b)(10)	Y	N	The Red Dog Mine waiver is included in Appendix G (G-3)
31.	Any Pb monitor for which a waiver has been requested or granted by EPA Regional Administrator for use of Pb-PM ₁₀ in lieu of Pb-TSP	58.10 (b)(11)	N/A		AK does not have any Pb monitoring requirements
32.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	N/A		AK does not have any Pb monitoring requirements
33.	Sampling schedule for Pb	58.10 (b)(4); 58.12(b); App A 3.4.4.2 (c) and 3.4.5.3 (c)	N/A		AK does not have any Pb monitoring requirements
34.	Frequency of flow rate verification for Pb monitors audit	App A 3.4.1 and 3.4.2	N/A		AK does not have any Pb monitoring requirements
35.	Dates of two semi-annual flow rate audits conducted in the previous CY for Pb monitors [Note: 5 -7 month interval is recommended but not a requirement.]	App A 3.4.3	N/A		AK does not have any Pb monitoring requirements

O₃ -SPECIFIC MONITORING REQUIREMENTS

36.	Minimum # of monitoring sites for O ₃ [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.] [Note 3: monitors that do	App D 4.1(a) and Table D-2	Y; Table 3-2		The only AK MSA with an O ₃ monitoring requirement is Anchorage, which has a waiver. Thank you for including the 2018 - 2023 O ₃ waiver for the Anchorage MSA as an appendix. AK only monitors ozone at the NCORE site.
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	not meet traffic count/ distance requirements to be neighborhood or urban scale (40 CFR Appendix E, Table E-1 cannot be counted towards meeting minimum monitoring requirements]				
37.	Identification of maximum concentration O ₃ site(s)	App D 4.1 (b)	N/A		AK only monitors ozone at the NCore site.
38.	Sampling season for O ₃ (Note: Waivers must be renewed annually. EPA expects agencies to submit re-evaluations of the relevant data each year with the ANP. EPA will then respond as part of the ANP response.)	58.10 (b)(4); App D 4.1(i)	Y, Table A-4	Y	
39.	An Enhanced Monitoring Plan for O ₃ , if applicable, no later than October 1, 2019 or two years following the effective date of a designation to a classification of Moderate or above O ₃ nonattainment, whichever is later.	58.10 (a)(11); App D 5 (h)	N/A		

NO₂ -SPECIFIC MONITORING REQUIREMENTS

40.	Minimum monitoring requirements for area-wide NO ₂ monitor in location of expected highest NO ₂ concentrations representing neighborhood or larger scale	App D 4.3.3	N/A		This requirement does not apply to Alaska, as the state does not have any CBSAs with populations >1,000,000
41.	Minimum monitoring requirements for susceptible and vulnerable populations monitoring (aka RA40) NO ₂	App D 4.3.4	N/A		
42.	Identification of required NO ₂ monitors as either near-road, area-wide, or vulnerable and susceptible population (aka RA40)	58.10 (b)(12)	N/A		

NEAR ROADWAY - SPECIFIC MONITORING REQUIREMENTS

In CBSAs ≥ 2.5 million, the following near-roadway minimum monitoring requirements apply:

43.	Two NO ₂ monitors	App. D 4.3.2(a); 58.13(c)(3) and (4)	N/A		AK does not have any CBSAs with populations >2.5M
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44.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	N/A		
45.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	N/A		
In CBSAs ≥ 1 million and AADT ≥ 250K, the following near-roadway minimum monitoring requirements apply:					
46.	Two NO ₂ monitors	App. D 4.3.2(a); 58.13(c)(3) and (4)	N/A		
47.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	N/A		
48.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	N/A		
In CBSAs ≥ 1 million and ≤ 2.5 million AND AADT < 250K, the following near-roadway minimum monitoring requirements apply:					
49.	One NO ₂ monitor	App. D 4.3.2(a); 58.13(c)(3)	N/A		
50.	One CO monitor	App. D 4.2.1(a); 58.13(e)(2)	N/A		
51.	One PM _{2.5} monitor	App. D 4.7.1(b)(2); 58.13(f)(2)	N/A		
SO₂ -SPECIFIC MONITORING REQUIREMENTS					
52.	Minimum monitoring requirements for SO ₂ based on PWEI and/or RA required monitors under Appendix D 4.4.3 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	Y; Table A-5	Incomplete	AK does not have any CBSAs with a Pop weighted EI >5,000. Table A-5, Sub-Table 1 should be updated with current census population values and 2017 NEI SO ₂ values.
NCORE -SPECIFIC MONITORING REQUIREMENTS					
53.	NCORE site and all required parameters operational: year-round O ₃ , SO ₂ , CO, NO _y , NO, PM _{2.5} mass, PM _{2.5} continuous, PM _{2.5}	App. D 3(b)	Y; Table 3-8	Y	

	speciation, PM _{10-2.5} mass, resultant wind speed at 10m, resultant wind direction at 10m, ambient temperature, relative humidity. NOy waiver, if applicable.				
54.	A plan for making Photochemical Assessment Monitoring Stations (PAMS) measurements, if applicable. The plan shall provide for the required PAMS measurements to begin by June 1, 2021.	58.10 (a)(10); 58.13 (h)	N/A		AK is not required to have a PAMS site since the State does not have any CSBAs with Pop greater than or equal to 1,000,000.

SITE OR MONITOR - SPECIFIC REQUIREMENTS (OFTEN INCLUDED IN DETAILED SITE INFORMATION TABLES)

55.	AQS site identification number for each site	58.10 (b)(1)	Y; table 3-3, 3-11	Y	
56.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	Y; table 3-3	Y	
57.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Y, SA description table p. 38	Incomplete	Please include CSA or other area represented by the Bethel monitor
58.	Parameter occurrence code (POC) for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Y Tables 3-12, 3-13, 3-14, 3-15	N	ADEC and EPA discussed the POC system last year. Having specific POC numbers for type of instrument (e.g. POC 1 is primary, POC 2 continuous, POC 3 collocated) is not required and it can cause more issues than it solves to update POCs in AQS. EPA will check with ADEC on the PM10 POCs for Parkgate/Eagle River, where two PM10 monitors have the same POC. Follow up info: this was a typo. FRM is reported as POC 1.
59.	Basic monitoring objective for each monitor	App D 1.1; 58.10 (b)(6)	Y; Tables 3-12, 3-13, 3-14, 3-15 provide both objective and type	Y	ADEC uses the terms "Monitoring Purpose" and "Monitoring Objective" differently than the CFR. ADEC may find it more straightforward to keep

					using the terms in a way that is consistent with their previous reports, but I will continue to note the difference from the CFR here.
60.	Site type (designation) for each monitor (e.g. SLAMS, SPM)	App D 1.1.1	Y; Tables 3-7; 3-8; 3-9; 3-10	N	See notes for row #9
61.	Monitor type for each monitor, and Network Affiliation(s) as appropriate	Needed to determine if other requirements (e.g., min # and collocation) are met	Y; Table 3-11	Y	See notes for row #59
62.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Y; Tables 3-4 (CO), 3-5 (PM), 3-6 (NCore)	Y	
63.	Parameter code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Y; Tables 3-7, 3-8, 3-9, 3-10	Y	
64.	Method code and description (e.g., manufacturer & model) for each monitor	58.10 (b)(3); App C 2.4.1.2	Y; Tables 3-7, 3-8, 3-9, 3-10	Y	
65.	Sampling start date for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Y, Tables 3-7, 3-8, 3-9, 3-10	Y	
66.	Distance of monitor from nearest road	App E 6	Y, Tables 3-5, 3-6, B-1, B-2, and B-3, pg 47	Y	
67.	Traffic count of nearest road	App E	Y, Table 3-5, 3-6	Y	

68.	Groundcover	App E 3(a)	Y, Tables B-1, B-2, B-3	Y	Butte does not meet groundcover or spacing from trees, but it is in the process of getting relocated
69.	Probe height	App E 2	Y, ANP App B	Y	What is the status of the NOy probe height? Follow up from ADEC: still needs waiver.
70.	Distance from supporting structure (vertical and horizontal, if applicable, should be provided)	App E 2	Y, Tables B-1, B-2, B-3	Y	Tables B-1 thru B-3 state "Criteria met" for horizontal and vertical placement
71.	Distance from obstructions on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(b)	Y, Tables B-1, B-2, B-3	Y	
72.	Distance from obstructions not on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(a)	Y, Tables B-1, B-2, B-3	Y	
73.	Distance from the drip line of closest tree(s)	App E 5	Y, Tables B-1, B-2, B-3	Y	Butte does not meet groundcover or spacing from trees, but it is in the process of getting relocated
74.	Distance to furnace or incinerator flue	App E 3(b)	Y, Table B-3	Y	
75.	Unrestricted airflow (expressed as degrees around probe/inlet or percentage of monitoring path)	App E, 4(a) and 4(b)	Y, Tables B-1, B-2, B-3	Y	
76.	Probe material (NO/NO ₂ /NO _y , SO ₂ , O ₃ ; For PAMS: VOCs, Carbonyls)	App E 9	Y, Table B-3	Y	Clarified borosilicate glass and FEP Teflon
77.	Residence time (NO/NO ₂ /NO _y , SO ₂ , O ₃ ; For PAMS: VOCs, Carbonyls)	App E 9	Y, Table B-3	Y	

CFR Definitions:

- **Monitoring Objective** can be one of three things: 1) Provide air pollution data to the general public in a timely manner; 2) Support compliance with ambient air quality standard and emission strategy development; or 3) Support air pollution research studies
 - o The ADEC ANP terms this "Monitoring Purpose"
- **Monitoring Site Types** are for the purpose of supporting the monitoring objectives, and there are six general types: 1) highest concentration; 2) typical concentrations in areas of high population density (aka population exposure); 3) source oriented; 4) background; 5) transport; 6) visibility/welfare
 - o The ADEC ANP terms this "AQS Monitoring Objective"
- **Spatial Scale**

- **Monitor designation:** can refer to *both* whether a monitor is FRM/FEM, and whether it is SLAMS or SPM. Further confusion: NCore, PAMS, and CSN are types of SLAMS
 - o ADEC ANP refers to SLAMS/SPM/NCore status as “monitor designation”
 - o The ADEC ANP does not explicitly specify which monitors are FRM/FEM beyond providing the method cod

Appendix II: Annual Network Plan Checklists for 40 CFR 58 Appendices A, B, and C

PART 58 APPENDIX A				
QUALITY ASSURANCE REQUIREMENTS FOR MONITORS USED IN EVALUATIONS OF NATIONAL AMBIENT AIR QUALITY STANDARDS				
STATE _____ AGENCY _____ AQS AGENCY CODE _____				
EVALUATION DATE _____ EVALUATOR _____				
APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
2.1	All PQAOs must develop a quality system that is described and approved in quality management plans (QMP) and QAPPs. Are approved QMPs/QAPPs in place?			
2.2	Each PQAo has an independent quality assurance management function.			
2.3	Measurement uncertainty of all criteria pollutant monitoring data are acceptable per the data quality objectives.			
2.6	Gaseous and flow rate audit standards used are traceable to NIST or another acceptable standard.			
3.1	All measurement quality check requirements for gaseous monitors of SO ₂ , NO ₂ , O ₃ , and CO were conducted per the methods and schedule set out in subsections 3.1.1 – 3.1.3			
3.2, 3.3, 3.4	PM _{2.5} , PM ₁₀ , and Pb flow rate verifications, flow rate audits, and collocated sampling were conducted per the methods and schedule set out in subsections to 3.2, 3.3, and 3.4			
3.2.3	PM monitor collocation: collocated monitors >= 15% of total monitors of each method designation and designation of a primary monitor if there is more than one monitor for a pollutant at a site			
3.2.3.4(c) and 3.3.4.2 (c)	All collocated QA monitors have the correct separation distance. For low volume PM instruments (flow rate < 200 liters/minute) > 1 m. For high volume PM instruments (flow rate > 200 liters/minute) > 2m.			
Comments:				

PART 58 APPENDIX B

QUALITY ASSURANCE REQUIREMENTS FOR PREVENTION OF SIGNIFICANT DETERIORATION (PSD) AIR MONITORING

STATE _____ AGENCY _____ AQS AGENCY CODE _____

EVALUATION DATE _____ EVALUATOR _____

APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
2.1	All Prevention of Significant Deterioration (PSD) PQAOs must develop a quality system that is described and approved in quality assurance project plans (QAPPs) that undergo approval.			
2.2	Each PSD PQAQO has an independent quality assurance management function.			
2.3	Measurement uncertainty of all criteria pollutant monitoring data are acceptable per the data quality objectives.			
2.6	Gaseous and flow rate audit standards used are traceable to NIST or another acceptable standard.			
3.1	All measurement quality check requirements for gaseous monitors of SO ₂ , NO ₂ , O ₃ , and CO were conducted per the methods and schedule set out in subsections 3.1.1 – 3.1.3 and Table B-1.			
3.2, 3.3, 3.4	PM _{2.5} , PM ₁₀ , and Pb flow rate verifications, flow rate audits, and collocated sampling were conducted per the methods and schedule set out in subsections to 3.2, 3.3, and 3.4 and Table B-1.			

Comments:

PART 58 APPENDIX C
AMBIENT AIR QUALITY MONITORING METHODOLOGY

STATE _____ AGENCY _____ AQS AGENCY CODE _____
 EVALUATION DATE _____ EVALUATOR _____

APPLICABLE SECTION	REQUIREMENT	CRITERIA MET?		
		YES	NO	N/A
2.1	Critical pollutant monitoring methods used for making NAAQS decisions at SLAMS sites must be reference or equivalent methods as defined in 40 CFR §50.1; OR have approve regional method (ARM) status.			
2.8	The FRM, FEM, or ARM monitors in the SLAMS network may not be modified in a manner that could significantly alter the performance characteristics of the method without prior approval by the Administrator.			
3.1	Methods employed in NCore multipollutant sites used to measure SO ₂ , CO, NO ₂ , O ₃ , PM _{2.5} , or PM _{10-2.5} must be reference or equivalent methods as defined in §50.1 of this chapter, or an ARM as defined in section 2.4 of this appendix, for any monitors intended for comparison with applicable NAAQS.			
3.2	If alternative SO ₂ , CO, NO ₂ , O ₃ , PM _{2.5} , or PM _{10-2.5} monitoring methodologies are proposed for monitors not intended for NAAQS comparison (e.g. rural background or transport sites), such techniques must be detailed in the network description required by §58.10 and subsequently approved by the Administrator.			
4.1	Methods used for O ₃ monitoring at PAMS must be automated reference or equivalent methods as defined in §50.1 of this chapter.			
4.2	Methods used for NO, NO ₂ and NO _X monitoring at PAMS should be automated reference or equivalent methods as defined for NO ₂ in 40 CFR §50.1. If alternative NO, NO ₂ or NO _X monitoring methodologies are proposed, such techniques must be detailed in the network description required by §58.10 and subsequently approved by the Administrator.			
4.3	Methods for meteorological measurements and speciated VOC monitoring are included in the guidance provided in references 2 and 3 of Appendix C. If alternative VOC monitoring methodology (including the use of new or innovative technologies), which is not included in the guidance, is proposed, it must be detailed in the network description required by §58.10 and subsequently approved by the Administrator.			

Comments: